For Immediate Release

Convey Computer Introduces Image Resizer Accelerator

– Utilizes FPGA-based Card to Resize Images Up to Seventy Times Faster than Conventional Servers in Hyperscale Computing Environments–

Richardson, Texas–July 15, 2014–Convey Computer, the leader in hybrid-core computing, today announced the Accelerated Image Resizer, a technology that utilizes an FPGA (field programmable gate array)-based PCI Express card to resize images up to seventy times faster than a conventional server. Convey's drop-in acceleration can be used to offload image resizing from existing web servers, a dedicated resizing tier, or a commercial Content Delivery Network (CDN). Using the technology, overall responsiveness of servers is significantly improved while operating costs are dramatically reduced.

Image resizing is an important component of content delivery for most web sites, especially those involved in social media, photo sharing, and online shopping. These sites often handle hundreds of images per session–accepting images from a variety of sources such as cameras, smartphones, or digital content creation applications–then delivering them in multiple resolutions to accommodate different layouts.

Resizing images to meet these requirements is computationally expensive and can represent a significant load on a server infrastructure. For instance, a 12 megapixel image from a modern mobile device can take as much as 1.5 seconds of computer processing time to rescale to a smaller size. When multiplied by dozens of images per page and many pages per second, image resizing consumes a substantial amount of computing horsepower to deliver scaled images.

Convey's Accelerated Image Resizer scales JPEG images using an FPGA-based coprocessor, offloading the host processors to deliver considerably higher throughput. The implementation collects resize requests and dispatches

them to the coprocessor where the hardware decodes, resizes, and re-encodes the images. These operations are highly parallelizable, resulting in much higher throughput compared to a conventional server.

"FPGA technology is becoming more and more popular as an effective way to accelerate certain applications, as witnessed by recent news from Intel and Microsoft," explained Bruce Toal, CEO of Convey. "At Convey, we're leading the industry in exploiting the parallelism available from FPGAs. Our image resizing application is just the latest example of how our easy to implement and use hybrid-core technology helps customers achieve dramatically higher throughput, reduce response time, and save money on infrastructure costs."

In November of last year, Convey announced that they would OEM Dell servers to accelerate data intensive applications for data centers. The Convey Accelerated Image Resizer technology is a direct result of that effort.

"Dell pioneered the hyperscale industry's inception about seven years ago with innovations that make customers' data centers more efficient in ways that have a direct correlation to savings in operating expenses," said Robert Hormuth, Dell Executive Director, Enterprise Platform Architecture & Technology. "By pairing Convey FPGA technology with Dell servers, we allow our hyperscale customers to accelerate the applications that matter to them, which can help reduce capex, space or power costs. In the case of this image resizing application, customers can achieve space savings of nearly 90% compared to using conventional servers."

The hardware resizing logic in the Convey Image Resizer delivers an average of forty-eight times the performance of a software implementation on a conventional processor. Because a single hybrid-core server achieves the performance on average of 48 commodity servers, customers can see a dramatic reduction in capital and operational costs. Savings include facilities (power, heat dissipation, floor space) and administrative overhead.

Convey's Accelerated Image Resizer may be deployed as a turnkey product; or the Convey application accelerator PCIe card and application may be custom integrated by the user. The accelerator can be reconfigured "on the fly" by simply loading a different application, allowing multiple applications to be hosted on the same hardware. Convey provides a development kit for customers

to develop their own applications, extending the system to address different needs.

Convey delivers accelerated hybrid-core solutions to customers who need powerful platforms to reduce time-to-solution, lower operating costs, and shrink data center footprints. This latest image resizing technology builds on the company's Wolverine® family of coprocessors, a powerful line of application accelerators that provide application-specific hardware acceleration for key algorithms. Announced in November of 2013, Wolverine's PCI Express form factor is ideal for accelerating applications in life sciences, big data, security, and other industries involved in high-performance computing (HPC).

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 the 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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