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Mercury Computer Systems Introduces 10 Teraflop ISR Subsystem Capability for Defense and Aerospace Applications

Revolutionary StreamDirect(TM) Technology and New NVIDIA Kepler(TM) Architecture-Ready GSC6201 GPGPU MXM Module Dramatically Increase System Throughput, Enabling Faster Intelligence for ISR Applications

CHELMSFORD, Mass., May 10, 2012 (GLOBE NEWSWIRE) -- Mercury Computer Systems, Inc. (Nasdaq:MRCY) (www.mc.com), a trusted provider of commercially developed application-ready ISR and EW subsystems for defense prime contractors, announced StreamDirect™, a highly efficient method for delivering streams of sensor data directly to specialized coprocessors such as general purpose graphics processing units (GPGPUs). StreamDirect increases the efficiency of GPGPU-based embedded computing systems, resulting in a three times performance improvement over previous generation GPGPU systems. StreamDirect increases performance by enabling terabytes of raw sensor data to be processed in real-time by optimizing the transfers from the I/O sensors to the GPGPUs, supporting over 10 teraflops (TFLOPS) of processing capability in a rugged OpenVPX™ system. Mercury has previously deployed StreamDirect in a number of programs and it is now being made available in Mercury's standard product – the 6U OpenVPX GSC6201. The GSC6201 is a carrier card that incorporates industry-standard GPGPU MXMs and is designed to accept those based on the NVIDIA Fermi™ and recently launched Kepler™ architectures.

Image: Mercury's GSC6201 OpenVPX GPGPU Carrier Card with StreamDirect™
Mercury Computer Systems' new GSC6201 OpenVPX GPGPU Carrier Card with StreamDirect(TM)

Mercury's StreamDirect enables direct communication of data from the source, such as a sensor input device, into a coprocessor's memory, such as a GPGPU, without intermediate storage in the CPU. Previously, systems that used GPGPUs had to first pass the data to a CPU's memory and then transfer the same data from the CPU's memory to the GPGPU, a cumbersome two-step process. StreamDirect eliminates this copy step, creating a direct, high-bandwidth DMA channel between the sensor and the GPGPU. StreamDirect leverages Mercury's POET™/ICS technology and NVIDIA GPGPU Direct to provide a system-wide communication capability that enables applications such as EO/IR, radar, cyber and electronic warfare to benefit from faster intelligence.

"The GSC6201 is our third generation OpenVPX MXM-based GPGPU carrier card, building upon our eight year track record of deployed GPGPU solutions," said Scott Thieret, Technical Director at Mercury Computer Systems. "With StreamDirect, we can now configure GSC6201-based systems with three times the performance of previous generation systems by eliminating intermediate data store-and-forward steps and enabling sensors to communicate directly with NVIDIA GPGPUs. Additionally, the combination of StreamDirect and the GSC6201 allows multiple GPGPU carrier cards to be hosted by a single CPU, significantly improving the overall system SWaP and GFLOPS/Watt."

To keep pace with the rapid advances in GPGPU innovations, Mercury adopted the industry standard MXM form factor to quickly deliver the latest GPGPU technology in a modular, rugged OpenVPX module. While the GSC6201 is available today with NVIDIA's embedded EXMF104 Fermi GPGPU, it can be quickly and easily upgraded to the latest GPGPU architectures as soon as they are available, such as the embedded Kepler MXM. The modular GPGPU MXM design enables customers to preserve their software and IP investments while accelerating their program development schedules and reducing program risk.

"The latest fighter jets and drone aircraft incorporate new sensors that demand huge amounts of real-time processing, making them ideally suited for NVIDIA's newest GPGPUs," said Vineet Gupta, Vice President of Global Automotive and Embedded Solutions at NVIDIA. "Mercury Computer Systems' StreamDirect unleashes the potential of multi-GPGPU systems, bringing leading-edge performance to defense-based systems when using the latest NVIDIA GPGPUs."

NVIDIA CUDA®, OpenCL™ and Mercury's Scientific Algorithm Library (SAL™) software development platforms are supported on the GSC6201, providing highly optimized processing functions based on open standards, cross-platform support, and porting of legacy applications to leverage massively parallel stream processing with GPGPUs.

StreamDirect for NVIDIA GPGPUs is available now. The GSC6201 is available now in commercial and rugged versions including air- and conduction-cooled configurations.

For more information on StreamDirect and the GSC6201, visit www.mc.com/gpgpu, or contact Mercury at (866) 627-6951 or info@mc.com.

Mercury Computer Systems, Inc. – Where Challenges Drive Innovation®

Mercury Computer Systems (www.mc.com) (Nasdaq:MRCY) is a best-of-breed provider of open, commercially developed, application-ready, multi-INT subsystems for defense prime contractors. With over 30 years of experience in embedded computing, superior domain expertise in radar, EW, EO/IR, C4I and sonar applications, and more than 300 successful program deployments including Aegis, Global Hawk and Predator, Mercury's Services and Systems Integration (SSI) team leads the industry in partnering with customers to design and integrate system-level solutions that minimize program risk, maximize application portability, and accelerate customers' time to market.

Mercury is based in Chelmsford, Massachusetts, and serves customers worldwide through a broad network of direct sales offices, subsidiaries, and distributors.

Forward-Looking Safe Harbor Statement

This press release contains certain forward-looking statements, as that term is defined in the Private Securities Litigation Reform Act of 1995, including those relating to contract described above. You can identify these statements by the use of the words "may," "will," "could," "should," "plans," "expects," "anticipates," "continue," "estimate," "project," "intend," "likely," "probable," and similar expressions. These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected or anticipated. Such risks and uncertainties include, but are not limited to, general economic and business conditions, including unforeseen weakness in the Company's markets, effects of continued geopolitical unrest and regional conflicts, competition, changes in technology and methods of marketing, delays in completing engineering and manufacturing programs, changes in customer order patterns, changes in product mix, continued success in technological advances and delivering technological innovations, continued funding of defense programs, the timing of such funding, changes in the U.S. Government's interpretation of federal procurement rules and regulations, market acceptance of the Company's products, shortages in components, production delays due to performance quality issues with outsourced components, inability to fully realize the expected benefits from acquisitions and divestitures or delays in realizing such benefits, challenges in integrating acquired businesses and achieving anticipated synergies, changes to export regulations, increases in tax rates, changes to generally accepted accounting principles, difficulties in retaining key employees and customers, unanticipated costs under fixed-price service and system integration engagements, and various other factors beyond our control. These risks and uncertainties also include such additional risk factors as are discussed in the Company's filings with the U.S. Securities and Exchange Commission, including its Annual Report on Form 10-K for the fiscal year ended June 30, 2011. The Company cautions readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. The Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made.

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A photo accompanying this release is available at <http://www.globenewswire.com/newsroom/prs/?pkgid=12839>

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Image: Mercury Computer Systems Logo

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