GSI AI Technology Helps Companies Realize Substantial Power Efficiencies, Improving Sustainability Efforts

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GSI's APU shown to use 93% less power than CPU or GPU systems

SUNNYVALE, Calif., Feb. 09, 2022 (GLOBE NEWSWIRE) -- GSI Technology, Inc. (NASDAQ: GSIT), the developer of the Gemini® Associative Processing Unit (APU) for Artificial Intelligence (AI) and high-performance parallel computing and provider of high-performance memory solutions for the networking, telecommunications and military markets, today announced that its new APU processor delivers a proven solution for significantly reducing power consumption when running AI search applications in data centers while enabling customers to improve their environmental and sustainability efforts.

Power consumption is a serious problem today in the data center. According to a recent study, today's data centers consume an estimated 198-terawatt hours or 1 percent of global electricity use. The amount of energy used by data centers doubles approximately every four years, meaning that data centers have the fastest-growing carbon footprint within the IT sector.

The concentration of compute technologies in enterprise data centers has allowed increasing energy consumption to be hidden behind closed doors. However, there is tremendous user cost, energy consumption, and environmental impact due to the inefficiency of these decades-old compute-centric and I/O-bound architectures—even as they are updated to the newest process technologies. It is becoming clear that simply packing more capacity and more cores, or just increasing density, is not helping when CPUs, FPGAs, and GPUs continue to use traditional compute methodologies.

This problem will likely increase as workloads become more data-intensive and AI-centric. New hardware and chipsets specifically designed for power efficiency must continue to be a major component of the design of future AI-centric data centers. GSI is helping to solve this critical problem with its new technology that brings enormous power savings. Datacenters using GSI's APU processors can achieve radical power savings with APU-based systems that require a much smaller energy footprint.

"From the migration of compute to the cloud to the increased need for on-prem business hardware, the race is on to acquire energy-efficient hardware and lower the power bill," said Lee-Lean Shu, chairman and CEO, GSI Technology. "Solving this problem is one of the strategic opportunities for our technology. Our new APU processor offers significant advantages in power consumption, enabling enterprise customers to reach their sustainability goals and do good for the planet. GSI has shown in a comparison for a large area SAR image in one second at high resolution that the Gemini-I APU used on average 93% less power than CPU or GPU systems, in a portable solution versus requiring a room of server cabinets."

About GSI Technology

GSI Technology, Inc. is a leading provider of semiconductor memory solutions. The Company recently launched the Gemini® Associative Processing Unit (APU), a memory-centric design that delivers significant performance advantages for diverse AI applications. The Gemini APU architecture removes the I/O bottleneck between the processors and memory arrays and performs massive parallel search directly in the memory where data is stored. The novel architecture delivers performance-over-power ratio improvements compared to CPU, GPU, and DRAM for applications like image detection, speech recognition, e-commerce recommendation systems, and more. Gemini is an ideal solution for edge applications with a scalable format, small footprint, and low power consumption where rapid, accurate responses are critical. For more information, please visit www.gsitechnology.com.

Forward-Looking Statements

The statements contained in this press release that are not purely historical are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding GSI Technology's expectations, beliefs, intentions, or strategies regarding the future. All forward-looking statements included in this press release are based upon information available to GSI Technology as of the date hereof, and GSI Technology assumes no obligation to update any such forward-looking statements. Forward-looking statements involve a variety of risks and uncertainties, which could cause actual results to differ materially from those projected. Examples of risks that could affect our current expectations include: those associated with the rapidly evolving markets for GSI Technology's products and uncertainty regarding the development of these markets; growth rate of energy usage by datacenters; changes in energy costs; intensive competition; and delays or unanticipated costs that may be encountered in the development of new products based on our in-place associative computing technology and the establishment of new markets and customer adoption of such products. Many of these risks are currently amplified by and will continue to be amplified by, or in the future may be amplified by, the COVID-19 global pandemic. Further information regarding these and other risks relating to GSI Technology's business is contained in the Company's filings with the Securities and Exchange Commission, including those factors discussed under the caption "Risk Factors" in such filings.

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