



GSI Technology Announces Tape-Out of the Gemini-II APU

October 18, 2023

SUNNYVALE, Calif., Oct. 18, 2023 (GLOBE NEWSWIRE) -- GSI Technology, Inc. (Nasdaq: GSIT), developer of the Gemini® Associative Processing Unit (APU) for AI and high-performance computing (HPC) and a leading provider of high-performance memory solutions for the networking, telecommunications, and military markets, today announced tape-out of the Gemini-II Associated Processing Unit, its second generation of the groundbreaking and patented compute-in-memory APU family, on TSMC's 16nm process.

Gemini-II will bring significant performance enhancements over Gemini-I with more than ten times the processing performance with eight times the memory density compared to Gemini-I. These upgrades provide 184 TOPS (8bit adds) and more than 5.8 Peta OPS for Boolean operations at 1.4GHz operation. Gemini-II's combination of high processing power, large built-in memory with tremendous bandwidth with reduced power consumption and latency provides a best-in-class solution for AI applications.

"This major achievement showcases our continued commitment to pushing the boundaries of AI chip technology," said Lee-Lean Shu, CEO and Chairman of GSI Technology. "We're in talks with a leading Cloud Service Provider to further explore the APU architecture benefits highlighted by Gemini-II. Large language models, such as ChatGPT, Microsoft BING, and Google's Bard, are pushing natural language processing boundaries. We've just begun to tap into their transformative potential across many industries and applications. Abundant opportunities await Gemini-II and future APU implementations in the AI market."

Gemini-II contains 1 million Bit Processors in six megabytes of associative compute memory tightly connected to 96 megabytes of distributed SRAM with a huge 46 terabyte per second bandwidth. The Gemini APU implements bit-granular processing, which allows users fully flexible cycle by cycle data format operation, an inherent advantage versus other parallel processors.

Gemini-II is a complete package that includes a DDR4 controller and external interfaces for PCIe Gen4 by 16, and PCIe Gen4 by 4. This integrated solution offers substantial processing capabilities, being suitable for both low power data center expansion and enabling data center functions at the edge. This empowers local execution of computationally intensive tasks, increasing the capabilities of edge applications like advanced driver assistance systems for automobiles, and HPC in delivery drones, autonomous robots, unmanned aerial vehicles, and satellites.

To learn more about GSI's Gemini APU visit <https://www.gsitechnology.com/compute>

ABOUT GSI TECHNOLOGY

Founded in 1995, GSI Technology, Inc. is a leading provider of semiconductor memory solutions. The Company recently launched radiation-hardened memory products for extreme environments in space and 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 by performing massive parallel searches directly in the memory array 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, including delays or unanticipated costs that may be encountered prior to the release of the Gemini-II APU and the establishment of new markets and customer and partner relationships for the sale of products based upon the Gemini-II APU, any of which could cause actual results to differ materially from those projected. 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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