Arteris Selected by Esperanto Technologies to Integrate RISC-V Processors for High-Performance AI and Machine Learning Solutions

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CSRCompiler, an SoC integration automation software solution, enables faster time-to-market and energy-efficient designs for AI inference and HPC applications at a fraction of the cost

CAMPBELL, Calif., June 11, 2024 (GLOBE NEWSWIRE) -- Arteris, Inc. (Nasdaq: AIP), a leading provider of system IP which accelerates system-on-chip (SoC) creation, today announced that Esperanto Technologies™, a leading developer of high-performance, energy-efficient artificial intelligence (AI) and high-performance computing (HPC) solutions based on the RISC-V instruction set, has chosen Arteris because of design familiarity with CSRCompiler for automation efficiency, error reduction and its integration capabilities. Esperanto will continue to utilize the SoC software to develop its next generation of energy-efficient solutions for AI inference and HPC workloads for data center and enterprise-edge applications.

At the heart of Esperanto's solutions are its ET-SoC-1 "supercomputer-on-a-chip" which is designed to run Generative AI and HPC workloads with reduced total cost of ownership (TCO) due to its highly energy-efficient operation. This complex SoC integrates over 1,000 energy-efficient 64-bit RISC-V cores with custom vector/tensor units optimized for machine learning (ML) applications and can run the latest large language models (LLMs) with just a fraction of the power required by a GPU, making it versatile for use in the data center and at the enterprise edge. The massive processor parallelism and configurations for registers and memory maps make the integration automation software, CSRCompiler, essential for achieving higher-quality silicon and faster time to market.

"Arteris is a leader in SoC integration automation technology and their software is an important part of our silicon design flow for managing complexity," said Art Swift, president and CEO of Esperanto Technologies. "Arteris' CSRCompiler software is a key enabler for achieving our silicon performance and power efficiency goals that will address the needs of the expanding data center and enterprise edge markets."

"We are pleased to continue to play a key role in the development of Esperanto's extremely complex SoCs," said K. Charles Janac, president and CEO of Arteris. "CSRCompiler's ability to streamline the design workflow and accelerate turnaround times empowers our customers to keep pace with rapidly changing market demands."

CSRCompiler from Arteris streamlines the hardware/software interface (HSI) foundation creation. The SoC integration automation software automates HSI design, verification, firmware and documentation, providing multi-language support without additional scripting. The method supports an agile flow to ensure best practices and early engagement by the entire team through collaborative management from a single source specification. CSRCompiler provides a complete, correct and up-to-date design ecosystem, turning address map sharing into a smooth and integrated process, preventing design mistakes and enabling faster turnaround times.

About Arteris

Arteris is a leading provider of system IP for the acceleration of system-on-chip (SoC) development across today's electronic systems. Arteris network-on-chip (NoC) interconnect IP and SoC integration automation technology enable higher product performance with lower power consumption and faster time to market, delivering better SoC economics so its customers can focus on dreaming up what comes next. Learn more at arteris.com.

About Esperanto Technologies

Esperanto Technologies Inc. delivers massively parallel, high-performance, energy-efficient computing solutions that offer a compelling choice for the most demanding Generative AI and non-AI applications. The changing, computationally intensive workloads of the machine learning era mandate a new clean-sheet solution, shedding the baggage of existing legacy architectures, and the programmability limitations of overspecialized hardware. Esperanto leverages the simple, elegant, open standard RISC-V instruction set architecture (ISA) to deliver flexibility, scalability, performance and energy-efficiency advantages. For more information, please visit https://www.esperanto.ai/

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