

Abacus Semiconductor Announces the Publication of its Heterogeneous Accelerated Compute™ Patent

PACIFICA, CA, UNITED STATES, April 22, 2025 /EINPresswire.com/ -- Abacus Semiconductor, a leader in High Performance Computing, announced today the publication of its key technology patent defining its unique Heterogeneous Accelerated Compute system architecture for supercomputer servers. This patent teaches a bold,

new server architecture that employs improved interconnectivity between CPU cores, accelerator cores and smart memory for data sharing, both within the chip and across chips. The seamless integration of accelerators into the system reduces the reliance on general purpose GPUs and facilitates better performance per Watt consumed. Additionally, the patent teaches smart memory techniques that improve memory performance, efficiency and system security, particularly in systems that share memory across multiple CPUs and accelerators. The resulting system architecture defines a generational leap in server performance and efficiency, drastically improving datacenter performance per Watt by at least an order of magnitude.

Dr. Axel Kloth, Founder and CEO of Abacus Semiconductor adds, "Abacus Semi's novel approach to scale-out in compute will help fulfill the demand that users have at price levels – including the TCO – that users can afford, especially for applications in the smart carrier edge and in re-homed, on-premises datacenters for business-critical applications. The compute architecture is a fundamental quantum leap, as this is only the third approach to computing after the von-Neumann and Harvard CPU architectures in the entire history of computers."

About Abacus Semiconductor Corporation

Abacus Semiconductor is a fabless semiconductor company and a leading developer of RISC-V based processors, accelerators and smart multi-homed memories for the computational backbone for Artificial Intelligence. This patented, revolutionary computing architecture is poised to solve the scalability challenges facing the booming AI infrastructure market. For more information about how Abacus Semiconductor Corporation is re-imagining high performance computing and Artificial Intelligence, visit the [Abacus Semi website \(https://abacus-semi.com\)](https://abacus-semi.com).



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