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Marvell Announces Innovative CXL Development Platform for Multi-Host Memory Pooling

Disruptive Platform Combines Marvell's CXL Technology with New 4th Gen AMD EPYC Processors to Accelerate Cloud Data Center Architecture Revolution

SANTA CLARA, Calif., Nov. 10, 2022 /PRNewswire/ -- Marvell Technology, Inc. (NASDAQ: MRVL), a leader in data infrastructure semiconductor solutions, today announced a Compute Express Link™ Development Platform for cloud data center operators and server OEMs. The platform pairs the company's advanced CXL technology with the latest CXL CPUs, including the new 4th Gen AMD EPYC™ processors, demonstrating multi-host memory pooling on these processors. Today, memory is a common bottleneck in cloud data center performance, as memory performance does not scale at the same rate as CPU performance. CXL technology eliminates this bottleneck by allowing flexible expansion and pooling of memory resources. Addressing the memory-scaling constraint is critical for compute- and memory-intensive applications such as artificial intelligence, machine learning, analytics, and large-scale search. With the new Marvell CXL Development Platform, cloud operators can begin to optimize their infrastructure and enable their applications to take advantage of this cutting-edge technology.

The platform provides for two CXL functions: memory expansion and memory pooling. Expansion enables the addition of memory resources at will, without the bandwidth degradation associated with traditional memory expansion using dual-inline memory module (DIMM) slots. Pooling allows memory to be shared and dynamically allocated across CPUs rather than allocated to a specific CPU. Both functions result in higher system-wide memory resource utilization, including the ability to make use of previously stranded memory.

The announcement of the development platform is Marvell's first public step towards CXL productization following the company's recent acquisition of CXL-specialist Tanzanite. Marvell's vision for the next-generation cloud data center is one in which the architecture is disaggregated and fully composable. The integration of CXL technology across the company's comprehensive, cloud-optimized portfolio of compute, electro-optics, networking, security and storage silicon will facilitate new data center architectures with significant efficiency and performance benefits.

"Data center memory directly being tied to processors is limiting cloud infrastructure scaling and overall efficiencies. CXL is going to change that," said Thad Omura, vice president marketing, Flash Business Unit, Marvell. "We're committed to giving our customers and partners the tools they need to integrate CXL technology into their designs as quickly as possible. Together with AMD and their 4th Gen EPYC processors, we're enabling them to do just that. With our new development platform cloud operators and OEMs are on the path to better system memory utilization and lower DRAM/memory costs."

"4th Gen AMD EPYC processors continue to raise the bar for workload performance in the modern data center while simultaneously delivering exceptional energy efficiency," said Ram Peddibhotla, corporate vice president, EPYC product management, AMD. "4th Gen AMD EPYC processors will transform our customers' data center operations by accelerating time to value, driving lower total cost of ownership, and helping enterprises to address their sustainability goals."

About Marvell

To deliver the data infrastructure technology that connects the world, we're building solutions on the most powerful foundation: our partnerships with our customers. Trusted by the world's leading technology companies for over 25 years, we move, store, process and secure the world's data with semiconductor solutions designed for our customers' current needs and future ambitions. Through a process of deep collaboration and transparency, we're ultimately changing the way tomorrow's enterprise, cloud, automotive, and carrier architectures transform—for the better.

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