AI-based data center optimization startup MangoBoost raises $55M Series A

Description

The central processing unit (CPU) and the graphics processing unit (GPU) handle different types of data. The CPU is used in almost all devices including computers, cellphones, tablets, smartwatches and TVs. It deals with processing general information on the device, making sure software is running correctly. While the GPU complements the CPU, it handles complex workloads like supercomputing, AI, machine learning and extensive data analysis where numerical precision is required.

The COVID-induced chip shortage led global chipmakers to search for alternatives to standard chips to help ensure a steady supply of semiconductors. At the same time, companies are constantly searching for more efficient ways to cut costs and improve productivity at the chip level. The data processing unit, or DPU, has emerged as a complement to CPUs and GPUs to help. The DPU offloads communication networking from the CPU or GPU to help optimize workload for cloud and data centers, and get help reduce the cost by reducing the workloads of more expensive GPUs and CPUs.

One DPU developer, MangoBoost, has raised a $55 million Series A for its DPU hardware and software solutions that help enterprises and data centers manage massive amounts of data to optimize workloads. The startup did not disclose its valuation with today's round, however, according to sources familiar with the matter, MangoBoost's valuation is estimated at around $300 million. The company has now raised $65 million.

The Seattle- and Seoul-based startup says its DPU solution enables data centers to reduce power consumption and optimize performance with cost efficiency and security. MangoBoost claims its DPU can achieve threefold higher performance than existing solutions and reduce CPU usage by up to 95% when the DPU is used in conjunction with Samsung's Petabyte SSD storage system.

The proceeds of the investment will help the one-year-old startup boost the development and operation of its products such as DPU hardware IP, DPU software, FPGA (Field Programmable Gate Array)-based DPU, ASIC (Application-specific integrated circuits)-based DPU, artificial intelligence-based DPU, customized DPU solutions and DPU-enhanced systems. It will also use the money to double its workforce by the end of next year, which currently counts 58 staff, including 71% of them on the R&D team.

CEO of MangoBoost, Jangwoo Kim, says the company achieved efficiency through more than nine years of R&D about how the DPU technology works for data centers at the Seoul National University laboratory.

Competition in the DPU market is increasing as Big Tech companies and semiconductor giants like Intel, Nvidia, AMD, Amazon and Microsoft invested in DPU vendors to bolster their optimization technology for data center services. A host of companies provides DPU-like technology, including Microsoft FPGA Smart NIC and Amazon Nitro.

Microsoft acquires Fungible, a maker of data processing units, to bolster Azure

Kim said that Intel, Nvidia and AMD offer their DPUs, typically as a PCIe card with their own DPU chip they have developed. He added that one of the key differentiators of MangoBoost's products is that it provides an extensive and customizable set of DPU features that can meet each customer's needs. That includes AI server DPU, big data server DPU and cloud server DPU.

"Our goal is to provide full-stack DPU hardware and software solutions to satisfy the various needs of customers," Kim said.

The outfit, which is in talks with several potential customers for partnerships, had a presentation at OCP Summit 2023 last week about its collaboration work with Samsung in applying MangoBoost's customized DPU to speed up Samsung's Peta Byte storage.

South Korean venture capital firms IMM Investment and Shinhan Venture Investment co-led the Series A. Korea Development Bank, KB Investment, Hong Kong-based IM Capital and Premier Partners also participated in the latest round.

Granulate nabs $30M for software to optimize workloads and latency

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