

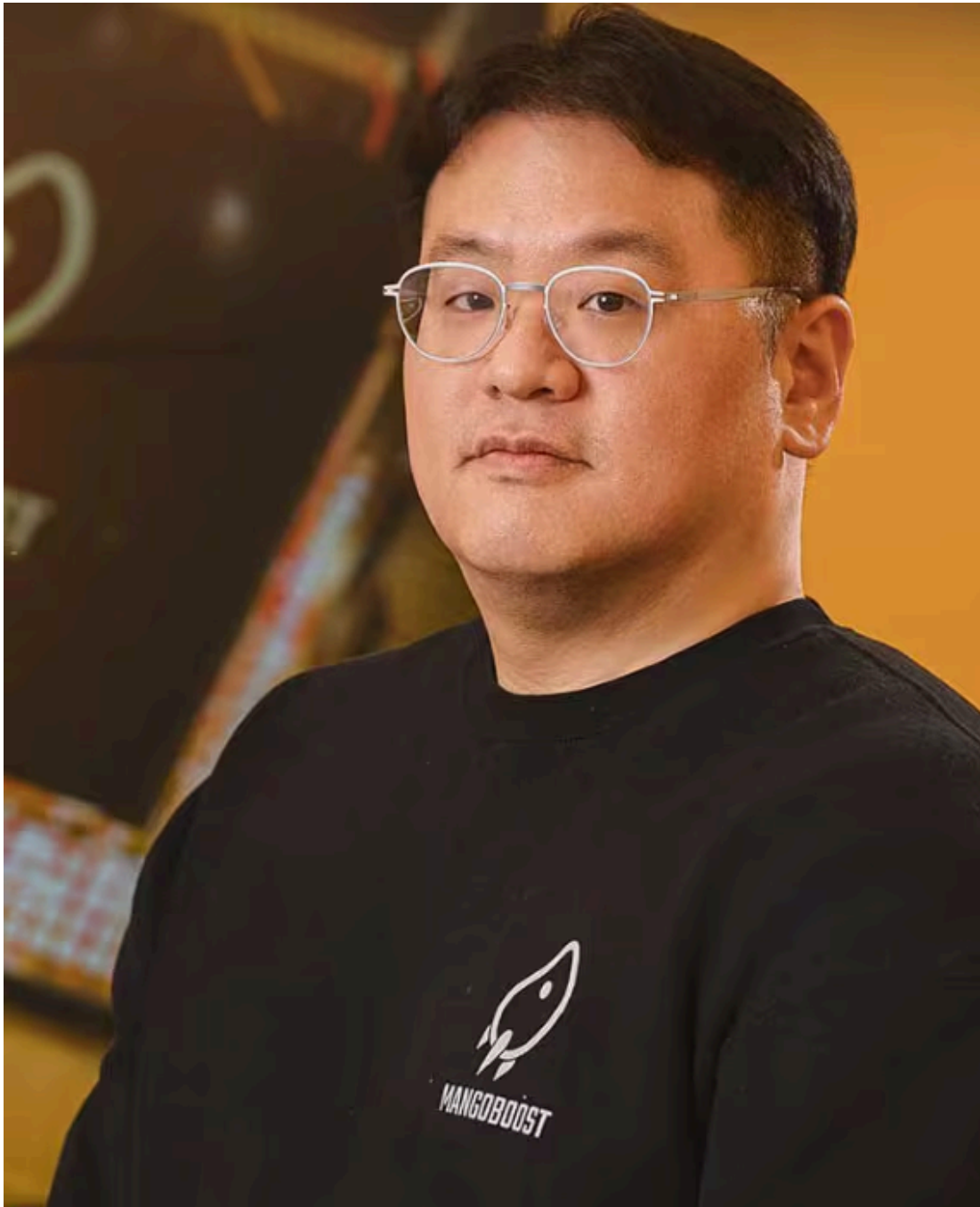
# Korean startup MangoBoost emerges as key player in global DPU market

Founded in 2022, the company has already hit a 400B won corporate value milestone.

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Kim Jang-woo, CEO and Founder of MangoBoost./MangoBoost

Data Processing Units (DPUs) are increasingly adopted by global tech giants to tackle the escalating strain on data center servers, particularly with the surge in Artificial Intelligence (AI) applications. DPUs, semiconductor systems, play a pivotal role in

mitigating server overload by optimizing the performance of Central Processing Units (CPUs), Graphics Processing Units (GPUs), Solid-State Drives (SSDs), and similar components, thereby enhancing server efficiency. According to a report by MarketsandMarkets, the global DPU market is projected to reach a value of 100 trillion won by 2027, growing annually at a rate of 35%.

This trend towards DPU adoption is underscored by Microsoft's recent acquisition of DPU startup Fungible. Prior to this, AMD acquired data center server semiconductor startup Pensando for \$1.9 billion in 2023, while Nvidia acquired Israeli semiconductor company Mellanox Technologies for \$7 billion in 2020.

Kim Jang-woo, 52, a professor at the Department of Electrical and Computer Engineering at Seoul National University, founded MangoBoost in 2022, with the goal of making a significant impact in the DPU market. With a background in Electrical and Computer Engineering from Cornell University and a Ph.D. from Carnegie Mellon University, Kim brings substantial expertise to the field. Having previously developed CPUs at Sun Microsystems (later acquired by Oracle), Kim is recognized for his contributions to the DPU field, earning accolades from esteemed computer systems societies such as ISCA and MICRO.

During an interview with ChosunBiz at MangoBoost's headquarters in Seoul's Gwanak-gu last month, Kim emphasized the growing need for DPUs in light of advancing AI performance. He noted, "With the advancement of AI performance, device overload and data bottlenecks are expected to become more severe." He further explained, "In fact, just to run ChatGPT, dozens of servers with GPUs costing tens of millions of won each are being used, but we are still unable to achieve the desired performance and continue to add servers."

Kim's interest in DPUs dates back to 2012. He recalled, "In 2018, upon hearing news that Amazon Web Services (AWS) was utilizing DPU solutions, I had a gut feeling that DPUs had market potential." Leveraging the design assets (IP) at MangoBoost, Kim collaborated with AMD to develop DPU products. Samsung Electronics is also utilizing this solution to develop products that boost storage capacity to the petabyte (PB) level.

MangoBoost has attracted investments totaling approximately 86 billion won, with a corporate value surpassing 400 billion won. Investment firms such as Shinhan Venture Investment, KB Investment, and Korea Development Bank are among its investors. Kim stated, “The fact that global companies have adopted MangoBoost’s IP proves its technological prowess.” He added, “We aim to dominate the global market.”

Regarding MangoBoost’s DPU solution, Kim highlighted its advantage in implementing server acceleration, unlike Nvidia’s DPU.