

Dnotitia Unveils VDPU IP, the First Accelerator IP for Vector Database

SEOUL, SOUTH KOREA, September 16, 2025 /EINPresswire.com/ -- Dnotitia Inc. (Dnotitia), a leader in long-term memory AI and semiconductor-integrated solutions, today announced the launch of its [VDPU](#) IP (Vector Data Processing Unit IP), the first semiconductor intellectual property (IP) purpose-built to accelerate vector database. The announcement was made at Design&Reuse IP-SoC Days Korea, a global forum hosted by

Design&Reuse and co-organized in Korea with the Korea Semiconductor Industry Association (KSIA), where Dnotitia's CTO Se-Hyun Yang presented "Accelerating Vector Database in the Data-Driven AI Era".



As businesses adopt technologies like Retrieval-Augmented Generation (RAG) and agentic AI systems, they face exponential growth in unstructured data and the challenge of retrieving relevant information with low latency and unpredictable costs. Conventional CPU-based software systems struggle to keep pace, resulting in bottlenecks and escalating infrastructure costs that slow the deployment of advanced AI.

Dnotitia's VDPU IP addresses these challenges at the silicon level. Designed for seamless integration into a System-on-Chip(SoC), the IP optimizes power, performance, and area (PPA) to support vector database operations and data access at efficiencies far beyond software-based approaches. Server systems built on VDPU IP are expected to deliver up to 10x faster search performance while reducing total cost of ownership by as much as 80%, making the technology practical for deployment not only in data centers but also in edge and on-device environments where efficiency is critical.

By addressing fabless chipmakers, cloud service providers, and data-storage vendors developing custom silicon strategies, Dnotitia is pioneering a new market segment for search-focused AI semiconductors.

“Generative AI will only reach its full potential when it can find relevant and retrieve multimodal contents as efficiently as it generates answers,” said MK Chung, CEO of Dnotitia. “VDPU IP is purpose-built to unlock that capability, creating a foundation for faster, more smarter, and more scalable AI systems.”

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