

# Imagination Optimizes PPA and Speeds the Delivery of Low-Power GPUs Using AI-Driven Cadence Cerebrus in the OnCloud Platform

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## Highlights:

- Using the Cadence AI-driven digital full flow in the cloud, Imagination reduced leakage power on its latest 5nm by 20% and total power by 6% while simultaneously improving area and performance
- Imagination optimized its latest 5nm GPU design automatically with Cadence Cerebrus generative AI technology
- Software-as-a-service (SaaS) model provided cost-efficient, rapid access to massively parallel compute and software license capacity for faster turnaround time

SAN JOSE, Calif.--(BUSINESS WIRE)-- Cadence Design Systems, Inc. (Nasdaq: CDNS) today announced that Imagination Technologies successfully utilized the AI-driven Cadence® Cerebrus™ Intelligent Chip Explorer and the complete RTL-to-GDS digital full flow to accelerate the delivery of their latest low-power 5nm GPUs. By leveraging the Cadence Cerebrus generative AI capabilities in Cadence's OnCloud platform, which enables pay-for-use flexibility and massive scalability, Imagination automatically reduced leakage power by 20% and total power by 6% while simultaneously improving area and performance.

Using AI-driven Cadence Cerebrus in a SaaS model provided the Imagination design team with the following benefits:

- Improved productivity, enabling the team to achieve power, performance and area (PPA) goals faster and accelerate time to tapeout

- Quick ramp-up with an EDA-optimized, ready-to-use, multi-cloud-enabled SaaS model that is security-compliant
- A cost-efficient, pay-for-use SaaS business model that offers massive compute and software license capacity to serve AI-driven peak demands
- Cost savings because no additional capital expenditures or IT efforts were required
- Pre-trained Cadence Cerebrus AI models available to Imagination and Cadence customers as a warm start for their design projects

“Our low-power 5nm GPUs had an aggressive delivery schedule and the AI-driven Cadence Cerebrus using a SaaS model gave us rapid access to a tailored Cadence-managed cloud environment on AWS—all without any CAPEX investment and the long wait times associated with on-premises hardware procurement and IT setup,” said Tim Mamtora, Chief of Innovation and Engineering at Imagination Technologies. “With the powerful combination of Cadence Cerebrus and the complete Cadence digital full flow, our team was able to automate processes that were previously manual, which saved us time and helped us achieve our PPA goals.”

“The AI-driven Cadence Cerebrus and the broader Cadence digital full flow are specifically designed for complex, next-generation designs like Imagination’s low-power 5nm GPUs,” said Dr. Venkat Thanvantri, corporate vice president of AI R&D in the Digital & Signoff Group at Cadence. “Through our collaboration with Imagination, they successfully leveraged AI-driven automation and the flexibility of our SaaS model to dramatically improve PPA and deliver a high-quality GPU design faster.”

The Cadence Cerebrus Intelligent Chip Explorer and the broader digital full flow provide optimal PPA and faster turnaround time, supporting Cadence’s Intelligent System Design™ strategy, which enables system-on-chip (SoC) design excellence. For more information on Cadence Cerebrus and the available SaaS model, visit [www.cadence.com/go/cerebrusbcpr](http://www.cadence.com/go/cerebrusbcpr).

## About Cadence

Cadence is a pivotal leader in electronic systems design, building upon more than 30 years of computational software expertise. The company applies its underlying Intelligent System Design strategy to deliver software, hardware and IP that turn design concepts into reality. Cadence customers are the world’s most innovative companies, delivering extraordinary electronic products from chips to boards to complete systems for the most dynamic market applications, including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial and healthcare. Fortune magazine has named Cadence one of the 100 Best Companies to Work For for nine years in a row. Learn more at [cadence.com](http://cadence.com).

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