Synopsys Hosts Startup and VC Connect: Advancing the Future of AI Silicon

What's New: This week Synopsys hosted its Startup and VC Connect event at the company's Sunnyvale, California headquarters, bringing together semiconductor startups, venture capital (VC) firms, and Synopsys experts to discuss the challenges and opportunities faced by emerging semiconductor innovators.

The proliferation and massive computational demands of artificial intelligence are driving architectural innovation and unprecedented opportunity for the semiconductor ecosystem. At the same time, soaring design complexity and cost make silicon development one of the highest-stakes engineering challenges today.

> *"AI is fundamentally reshaping how silicon is architected and brought to market, creating enormous opportunity alongside unprecedented complexity," said Antonio Varas, chief strategy officer at Synopsys. "The growing market opportunity and expanding architectural diversity opens the door for startups to play a critical role advancing the next generation of AI silicon."*

Why it Matters: As complexity and capital requirements rise, collaboration across startups, partners, and investors is becoming essential to turn new architectures into production-ready silicon.

Synopsys helps semiconductor startups reduce technical and execution risk by providing access to proven design tools, silicon IP, and foundry-ready workflows used by leading chip companies. This lets them focus on differentiation while navigating increasing design complexity and cost.

The opportunity for silicon startups is expanding as AI workloads shift from training to inference and agentic systems, and the compute landscape undergoes a fundamental change. According to the Futurum Group, the AI semiconductor market is projected to reach $1.2 trillion by 2030, with the CPU segment emerging as a key growth driver at an estimated CAGR of over 30%. Meanwhile, investment in custom silicon architectures is growing faster than general-purpose accelerators — a clear signal of the industry's shift toward purpose-built silicon, optimized for specific AI workloads.

Expanding demand across GPUs, CPUs, custom ASICs, and specialized inference silicon is creating opportunities for both established players and new semiconductor entrants. At the same time, startups face high barriers to entry. Consider a single advanced-node AI chip design can cost $500 million to $875 million, and typical designs require two to three tape-outs, driving $1 billion to $2.5 billion in design and fabrication costs before the first chip ships.[1]

A Closer Look: This week's Synopsys' Startup and VC Connect focused on the practical realities of building and manufacturing AI silicon, as well as how Synopsys can help. Here's a brief overview of the conversations on-site:

- **Investor perspectives on what drives success**: leaders from venture capital firms including Celesta, Lam Capital, and Plug and Play shared how architecture choices, execution speed, and capital efficiency shape their funding decisions, and how trusted ecosystems can reduce risk and improve scalability. Steve Fu, partner at Celesta shared:

  > *"You need to have a clear understanding of the problem you're solving and why your solution is head and shoulders ahead of the current solution. And with semiconductors, you really need 'big brothers' or big partners that appreciate what you're doing so you have a built-in partner or customer that is waiting for your product."*

- **Startup lessons from navigating the "last mile" to production:** Founders and engineering leaders from Cerebras, DensityAI and Rapidus discussed the often overlooked challenges of physical design closure, GDS handoff, foundry readiness, advanced packaging, and supply-chain risk. Benjamin Floering, head of engineering at DensityAI shared:

  > *"Don't underestimate the relationship-building process. Working with and trusting your design partners is key. Choose partners you trust who do the right thing and are strong collaborators."*

- **How cloud-based models are reshaping access to EDA**: Synopsys experts highlighting how scalable, pay-per-use tools and dependable support help startups minimize overhead, preserve capital, and stay focused on innovation.

Synopsys experts also shared how the company's solutions can specifically address the needs of semiconductor startups by:

- **Reducing risk from architecture to first silicon** through silicon-proven interface IP and shift-left design approaches enable earlier software bring-up, faster convergence, and more predictable outcomes.
- **Accelerating execution with cloud-scale emulation**, showcasing how on-demand emulation supports early

hardware-software integration while giving fast-moving teams the flexibility to scale as designs mature.
- **Applying AI across design and simulation**, with insights into how AI-driven EDA, multiphysics simulation, and generative AI are helping startups manage complexity and improve the odds of first-pass silicon success.

Other Resources: Find out more about the Synopsys Start Up Program.

[1]***Data Sources:*** *Market forecast and enterprise survey data cited in this release are sourced from the Futurum Group Intelligence Platform (1H 2026 dataset). Chip design cost estimates are based on IBS (International Business Strategies) industry analysis.*

Additional assets available online: