

Synopsys and Mentium

Accelerated Tape-Out of AI Chip for Space Applications on Synopsys Cloud

“Just like our AIM technology that focuses on the highest AI precision with dependability, throughput, and efficiency, Synopsys Cloud provides the most dependable, productive, and complete EDA SaaS environment for designing chips.”

~Mirko Prezioso, CEO, Mentium Technologies



Business

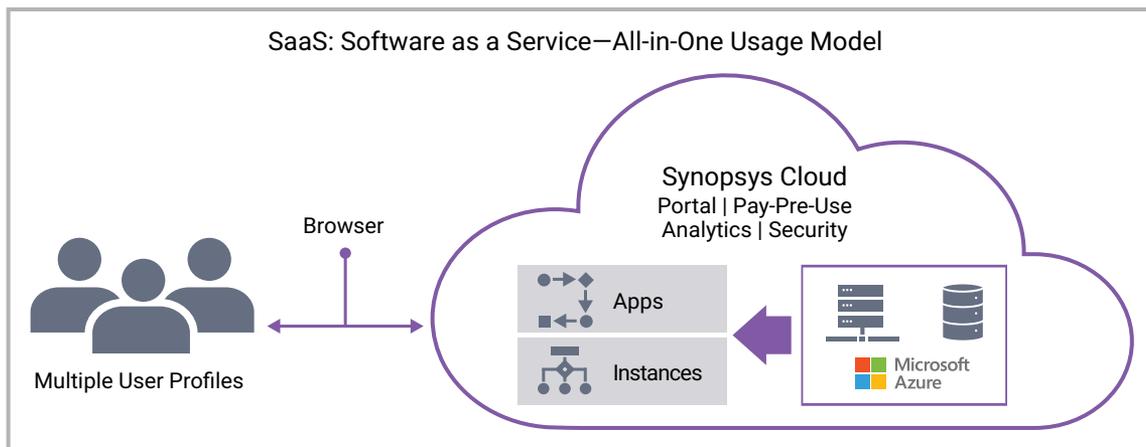
Mentium Technologies, a Santa Barbara, CA, based company, is working on AI chips for mission-critical space, robotics and security applications. Mentium brings the most dependable AI at the edge, providing co-processors capable of cloud-quality inference at ultra-low power to tackle the most complex and critical AI applications. With its AIM technology, Mentium aims to provide the highest AI precision with dependability, throughput, and efficiency with ultra-low power.

Challenges

- Tape-out schedule at risk
- Compute and storage not scalable, nor available on demand
- Mission critical designs need faster iterations for extensive verification and quality
- Unable to tap into advantages of cloud for peak EDA workloads due to license constraints

Synopsys Solution

- Synopsys Cloud SaaS solution, a complete browser-based platform for SoC design projects, provides EDA tools and infrastructure
- FlexEDA model with true pay-per-use (PPU) licensing for EDA tools and flows delivers access to unlimited, on-demand licenses complementing scalability and elasticity of cloud
- Pre-configured EDA flows and pre-optimized compute reduce setup time from weeks to days



Benefits

- **Production environment:** Up and running in two days
- **Meet tape-out schedule confidently:** Accelerated time-to-results provides ability to do more iterations, enabling team to uncover issues early in design stages
- **Complete user and EDA license management:** On-boarding and addition/removal of users is seamless, without overhead to manage EDA software, license installation, and license server management
- **Access to advanced compute resources:** Ability to leverage the latest high-performance compute configurations on-demand for critical peak EDA workload requirements
- **Reduced OpEx:** Flexibility to use resources only when needed with on-demand compute and pay-per-use EDA software access
- **Availability:** Entire portfolio of Synopsys EDA software and high-quality, silicon-proven Synopsys IP

Synopsys Cloud SaaS Solution

There were several factors that drove the adoption of the Synopsys Cloud solution. “We were at risk of missing a tape-out because of the inability to scale compute and storage resources on demand. Synopsys came to our rescue by introducing the Synopsys Cloud SaaS solution, providing not only EDA software tools, but also the entire CAD/IT infrastructure,” said Mirko Prezioso, CEO, Mentium Technologies. “We were amazed to see the capabilities of Synopsys Cloud with an all-in-one browser-based platform providing access to unlimited, on-demand EDA and compute resources. Under FlexEDA, both traditional and novel pay-per-use software access (by the minute) removed licensing constraints without affecting budgets and spending upfront. Within a few weeks, we were fully confident about the maturity of the Synopsys Cloud platform and how it can help us meet our immediate tape-out schedule date.”

“We were able to deliver our first tape-out on time and worked on pulling in the schedule for the next tape-out, to be delivered to our Alpha-site at NASA. Synopsys Cloud is a one-stop shop for our entire chip design project. It brings EDA, IP, CAD/IT resources, and overall project management capabilities together for a seamless and complete design experience.”

~Mirko Prezioso, CEO, Mentium Technologies

“With an intuitive UI/UX coupled with on-demand compute, storage, and true pay-per-use EDA access, Synopsys Cloud allows us to harness the full potential of the cloud for EDA workloads to complete designs faster and with improved quality.”

~Mirko Prezioso, CEO, Mentium Technologies

Expert and Responsive Technical Support

Mentium Technologies utilized Synopsys' responsive worldwide support team during the engagement. "One of our challenges from the start was bringing team members up to speed to meet our tape-out requirements," said Farnood Merrikh Bayat, CTO and co-founder at Mentium. "The Synopsys sales, technical support, and R&D teams worked together to help us become familiar with the platform. We are fully convinced Synopsys Cloud offers an excellent platform to develop our current and future SoC designs."

About Synopsys Cloud

Synopsys Cloud combines the availability of advanced computing and storage infrastructure with unlimited access to EDA software licenses on demand so you can focus on what you do best—design chips—faster. With cloud-native EDA tools and pre-optimized hardware platforms, an extremely flexible business model, and a modern customer experience, Synopsys has reimagined the future of chip design on the cloud that doesn't disrupt proven workflows.

The Synopsys Cloud FlexEDA business model offers two licensing options: pay-per-use (PPU) and cloud subscription license (CSL). PPU is an industry-first, true usage based licensing approach for EDA tools. Synopsys Cloud FlexEDA provides access to unlimited, on-demand EDA software licenses which is a transformational change compared to traditional EDA software licensing models. With Synopsys Cloud FlexEDA, many Synopsys tools are now available for use by the minute, providing customers with the granularity they need for peak usage bursts in the cloud. This helps reduce time to results significantly and deliver a better quality design ahead of time.

Users can choose from two deployment options: Bring-Your-Own-Cloud (BYOC) and Software-as-a-Service (SaaS). Synopsys Cloud offers the flexibility to use either one or both deployment options, depending on customer requirements.