

About the Company

VSAP LAB is a fully-funded Vietnamese startup specializing in Advanced Packaging solutions for semiconductor chips. We focus on research and innovation to provide design, manufacturing, prototyping, and testing services. Our mission is to deliver the best form factors, performance, and fastest time to market for our customers' chips. We aim to enable a complete semiconductor ecosystem in Vietnam. Through pioneering technology, we accelerate the growth of the local semiconductor industry.

If you are a talented person with a growth mindset, start-up spirit, keen on learning new things everyday and wants to be part of a journey that have a big impact for generations to come, this might be a perfect role for you.

Position Overview

The **Design Engineer** is a key technical role responsible for the circuit and electrical design of advanced semiconductor products. This position focuses on ensuring structural and functional integrity through rigorous simulation and analysis, including SI/PI, Thermal, and Warpage. The Design Engineer will play a vital role in optimizing product performance for diverse applications such as Wearables, IoT AI, and Automotive, while establishing standardized simulation flows and collaborating with external partners to drive technology development..

Key Responsibilities

Design Analysis & Optimization

- Perform comprehensive SI/PI (Signal Integrity/Power Integrity), Thermal, and Warpage analysis for planned product lines, including Wearable devices, UAVs, IoT AI, and Automotive applications.
- Conduct electrical qualification for machine setup and validation to ensure production readiness.
- Continuously study and optimize designs for company products to enhance performance, reliability, and cost-effectiveness.
- Develop and maintain system-level modeling and simulation to predict product behavior under various operating conditions.

Process Modeling & Flow Development

- Establish and standardize the SI/PI simulation flow to ensure consistency and accuracy across all design projects.
- Execute modeling for CoS (Chip-on-Substrate) and CoW (Chip-on-Wafer) processes to generate technical process files (Tech Files).
- Collaborate with foundries and customers to align on product design requirements, manufacturing constraints, and technology roadmaps

Technical Documentation & Standards

- Utilize industry-standard design tools (Cadence, Synopsys, Ansys) to create high-quality design layouts and simulation reports.
- Define and document design rules and guidelines to improve internal design efficiency and quality control.

Cross-functional Collaboration

- Partner with Engineering and Production teams to align design specifications with machine capabilities, ensuring seamless manufacturability and product reliability.
- Collaborate directly with customers and foundries to synchronize design requirements, resolve technical challenges, and optimize advanced packaging processes (CoS/CoW).

Requirements

- Bachelor's or Master's degree in Electrical Engineering, Electronics, Semiconductor Physics, or a related field.
- Minimum 4 years of professional experience in Semiconductor Circuit Design and Electrical Design.
- Proven track record in Design Analysis, specifically in SIPI, Thermal, and Warpage simulation
- Expert proficiency in electronic design automation (EDA) and simulation tools: Cadence, Synopsys, or Ansys.
- Deep understanding of semiconductor packaging processes, particularly CoS and CoW.
- Strong knowledge of high-speed digital design and power distribution network (PDN) principles
- Strong analytical and problem-solving mindset.
- Ability to collaborate effectively with cross-functional teams, customers, and external foundries
- Excellent technical communication skills in English and Vietnamese.
- Entrepreneurial mindset: willing to take on tasks beyond core responsibilities when needed in a fast-paced startup environment.
- Detail-oriented, organized, and able to work independently as well as in a team.
- Strong teamwork spirit with a positive, collaborative attitude.
- Good communication skills with internal departments, external agencies, suppliers, financial institutions.
- Friendly, approachable, and driven by a sense of community service and long-term impact.

Contact

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