SiP System and Design Architect (m/f/d)

Ihre Aufgaben

The SiP System and Design Architect (m/f/d) is responsible for following tasks:

- Translating product and use-case requirements into executable SiP functional architectures, chip or chiplet partitions and package-level design concepts
- SiP floorplanning, die-to-die communication concepts, substrate electrical architecture and package-board interfaces
- System-level concepts covering performance, dataflow, timing, boot, power management, functional safety, cybersecurity interfaces, testability, redundancy and repair
- Setting up virtual architecture models that enable early performance assessment and design-space exploration before physical implementation
- Maintaining architecture specifications, interface definitions, design constraints and cross-domain alignment between system, silicon, software, package, test and manufacturing stakeholders
- Representing AUMOVIO in relevant external industry associations, consortia and collaborative research programs and for transferring applicable results, requirements and ecosystem developments into internal SiP architecture activities
- Capturing and analyzing product requirements, workloads, interfaces, safety goals, timing constraints, power targets, package limitations, and cost assumptions
- Developing alternative chip and chiplet partitioning concepts and evaluate functional allocation, dataflow, latency, bandwidth, power, reuse, supply risk and scalability
- Creating SystemC and Transaction-Level Modeling based executable models for architecture exploration, performance assessment and interface evaluation
- Defining die-to-die interface requirements and protocol concepts, including bandwidth, latency, coherency, link initialization, monitoring, error handling and interoperability constraints
- Developing preliminary SiP floorplans covering die placement, interface proximity, routing resources, power distribution, thermal constraints, keep-out regions and test access
- Defining the package electrical architecture, including substrate stack-up requirements, high-speed routing constraints, power-delivery concepts, grounding and decoupling strategy
- Developing architecture concepts for boot, power sequencing, clocking, reset, diagnostics, functional safety, cybersecurity interfaces, redundancy and repair
- Defining design for test, design for manufacturability, design for reliability and system-level test requirements together with the respective experts and external partners
- Coordinating architecture trade-offs and design reviews with product, integrated-circuit, software, package, simulation, test, safety, security and supplier stakeholders

Job ID
REF81747N

Arbeitsbereich
Engineering

Standort
Regensburg

Leadership Level
Leading Self

Ansprechpartner
Sarah Schwarz

Rechtliche Einheit
AUMOVIO Germany GmbH

- Maintaining architecture documents, interface specifications, assumptions, verification criteria, technical risks and reusable SiP design guidelines

Ihr Profil

- Academic degree in Electrical Engineering, Microelectronics or comparable qualification
- In-depth experience in semiconductor technology
- Long-term experience in IC design methodology and EDA tools
- Several years of experience in System-on-Chip, multi-die, System-in-Package or complex embedded-system architecture
- In-depth experience in system architecture, chip partitioning, performance modeling, interface definition and hardware/software co-design
- Profound Experience with SystemC, Transaction-Level Modeling or comparable virtual prototyping and architecture exploration methods
- Deep Knowledge of high-speed die-to-die and package interfaces (like with Universal Chiplet Interconnect Express - UCIe), protocol concepts, signal and power integrity constraints and substrate design fundamentals
- Knowledge of boot, clock, reset, power management, diagnostics, functional safety, cybersecurity interfaces, redundancy and repair concepts
- Experience with package or substrate floorplanning, electrical package design, layout constraints and design-rule handover preferred
- Experience in design for test, system-level test concepts and requirements engineering for automotive electronics preferred
- Business fluent English language skilles (written and spoken), German language skills preferred
- Initiative - self-confident, taking ownership and acting proactively
- Ability to learn continuously by being open and flexible to new tasks/fields
- Good Communication skills
- Customer focus - anticipating and understanding the customers' needs
- Motivation and Inspiration
- Team player and contributes towards team goals

Applications from severely handicapped people are welcome.

Unser Angebot

- Next to the interesting daily work the region around Regensburg is offering a high recreational value and quality of life.
- Profit from extensive benefits at the location such as different canteens and cafeterias, a continuing education and training, health management, physiotherapy and much more.
- We offer an attractive salary as well as the possibility of hybrid and cross-border mobile work.
- For an improved work-life balance we support you with various initiatives for a better compatibility of family and career such as flexible work time model, part-time option, sabbatical, etc.

- You can expect a highly motivated team as well as diverse topics and projects in the global environment of the automotive industry.
- We are promoting lifelong Learning combined with personal and professional development.
- You are looking for an individual working time model? We support part-time work.

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Ready to take your career to the next level? The future of mobility isn't just anyone's job. Make it yours! **Join AUMOVIO. Own What's Next.**

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Since its spin-off in September 2025 AUMOVIO continues the business of the former Continental group sector Automotive as an independent company. The technology and electronics company offers a wide-ranging portfolio that makes mobility safe, exciting, connected, and autonomous. This includes sensor solutions, displays, braking and comfort systems as well as comprehensive expertise in software, architecture platforms, and assistance systems for software-defined vehicles. In the fiscal year 2024 the business areas, which now belong to AUMOVIO, generated sales of 19.6 billion Euro. The company is headquartered in Frankfurt, Germany and has about 87.000 employees in more than 100 locations worldwide.