Silicon Mobility
An Intel Company
535 Route des Lucioles
Les Aqueducs – Bâtiment 2
06560 Valbonne /
Sophia Antipolis France

Location: Sophia-Antipolis, France

Ref: RD_SEN_SYS_ENG

Employment type: Full-time employment

Contract type: permanent contract

SYSTEM ENGINEER

The Automotive industry is living a revolution. Electrification, autonomous driving, diverse mobility, connectivity are trends that are drastically changing the industry's rules. Among all decisive topics revolutionizing cars in the next future, Silicon Mobility is committed to support the rapid advent of electric and hybrid cars.

Silicon Mobility is a technology leader for cleaner, safer, and smarter mobility. The company designs, develops and sells flexible, real-time, safe, and open semiconductor solutions named FPCU (Field Programmable Control Unit) for the automotive industry used to increase energy efficiency and reduce pollutant emissions while keeping passengers safe.

The Company is opening a "**System Engineer**" position in its main Research and Development center ideally located in the Sophia-Antipolis Technology Park on the French Riviera.

You are a brilliant and passionate System Engineer for Automotive Applications? You want to support the development of disruptive products accelerating the car powertrain electrification? At Silicon Mobility, we would like to light up our employees' potential. Are you up for the challenge? Contact us and send your resume and cover letter to **recruitment@silicon-mobility.com**

ROLE & MISSIONS

As a System Engineer within the System and Software Engineering team, you will be responsible for the specification and development of high-performance control algorithms such as On-Board Chargers, DC-DC Converters, e-Motors (PMSM, WRSM, ASM) and traction Inverters for hybrid and electric vehicles. You will also participate in the verification and validation of these powertrain control algorithms.

An understanding of powertrain system control theory is essential to carry out daily activities as well as knowledge and experience implementing control algorithms in Matlab/Simulink in both continuous and discrete time domains. In addition, experience in hybrid and electric vehicles architecture will be a strong asset to our team. A good knowledge of programming will also help you to coordinate and work closely with embedded software engineers.

Main responsibilities of the position of System Engineer include to:
- Participate on system requirements analysis and architecture definition.
- Conduct a feasibility study for new features (literature review, theoretical analysis, theoretical implementation).
- Specify, Design, implement and integrate control algorithms for the powertrain system.
- Work closely and collaborate with embedded software engineers to define, implement, and test SW requirements, architecture, and design elements.
- Participate in verification and validation of powertrain control algorithms (MIL, SIL and HIL).
- Document powertrain control algorithms.
- Apply AGILE and A-SPICE development flow.
- Ensure the quality management by understanding ISO26262 guidelines.
- Provide support to FAE and customers.

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The position requires pro-active involvement with all departments of the Company and customers.

REQUIRED SKILLS AND EXPERIENCE

EDUCATION:
- Master's degree in electrical engineering and/or Power electronics control

TECHNICAL SKILLS & EXPERIENCE:
- Minimum of 2 years of experience in at least one of these domains:
  - E-motor-Inverter control algorithms development such as Position Tracking Loop, Space Vector Modulation, Direct/Indirect Field Oriented controls, sensor less control.
  - DC/DC control algorithms development for different topologies, for different applications in the electric powertrain (Such as: CLLC/LLC, Phase Shift Full Bridge, multi phases).
  - OBC control algorithms (PFC, BMS…)
- Good knowledge of Matlab/Simulink Tool
- Knowledge of hybrid and electric vehicles (HEV/EV) architecture (V2G Integration, Charging infrastructure, Powertrain configuration, ….)
- General knowledge of microcontroller development.
- Knowledge of AGILE methodology and A-SPICE development flows and quality norms (ISO 9001, ISO 26262).

LANGUAGE SKILLS:
- Fluent in English
- French speaking is a plus.

BEHAVIORAL SKILLS:
- Global/multi-cultural team spirit
- Autonomous, rigorous with a strong team spirit
- Be self-motivated, pro-active, flexible, and capable of accepting new challenges.
- Effective communication skills be able to work efficiently across different teams within Silicon Mobility, considering their individual needs and constraints.
- Strong problem-solving skills, be able to identify issues, obstacles, and opportunities and then develop and implement effective solutions.