Silicon Mobility
An Intel Company

Internship Description

SoC Verification on FPGA

(SM-STC 002 / 2025)

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What we offer

Company	**SILICON MOBILITY SAS, an Intel Company** 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, an Intel company, 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 looking for a motivated candidate to join our R&D team based in Sophia-Antipolis on the Riviera. If you are interested, please send us directly your application and CV on the Intel Website careers or send them to recruitment@silicon-mobility.com .
Offer ref.	SM-STC 002-2025
Subject – Offer title	SoC verification on FPGA
Duration	5-6 months– between February/March/April and September 2025
Work hours	35 hours per week, job location at Silicon Mobility office
Education	Last year of Master (BAC+5 or equivalent)

Content/ mission	As part of its product roadmap, Silicon Mobility is developing its new generation of System-on-Chip called OLEA® FPCU (Field Programmable Control Unit). This innovative architectural component is based on a multi-core architecture combined with a patented real-time subsystem including an embedded programmable logic structure.
	The proposed internship addresses a specific need of the SoC development team: participation in the verification of the SoC on an FPGA prototype. The prototyping of the SoC on FPGA allows the design team to verify various functionalities (or IP) quickly and deeply.
	The following activities will be carried out during the internship:
	• Set up a flow to be able to run a test or a complete regression on a remote FPGA.
	• Participate in the definition of various tests to be run on the FPGA prototype such as:
	  ◦ Performance tests: allowing for improving the architecture of the SoC itself.
	  ◦ Robustness tests: allowing to quickly find corner cases bugs.
	  ◦ Debug-oriented tests: allowing testing part that is difficult to verify in simulation only.
	  ◦ Application porting: Porting a real system application on the FPGA prototype helps to improve the architecture and to find bugs early in the SOC conception.
	• Develop tests. Essentially in C language plus a few modules in Verilog.
	• Debug tests on the FPGA board and under the logic simulator.
	• Establishing the traceability matrix of test requirements.

Profile required	For this internship, we are looking for a student in the field of embedded systems. A strong general culture in the development of embedded systems on digital chips is required. The qualities of autonomy, rigor, and ability to work as a team are important.
Expected Skills/knowledge	• Requirement analysis, development of a test plan • Embedded software development in C. • Digital module development in Verilog. • Use of simulation and digital debug tools (QuestaSim or equivalent) • Knowledge development on Systems on Chip (SoC) • A good level of English is required
Remuneration	€1400/month + Tickets Restaurant + Public transport

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