Internship Description

Embedded Logic Analyzer Support

(SM-STC 009 / 2023)

What we offer

Company	**SILICON MOBILITY SAS** *(registration number 815 085 659 000 RCS Grasse)* Head office : Les Aqueducs – Bât 2 – 535, route des Lucioles – 06560 Valbonne Sophia-Antipolis The Automotive industry is living a revolution. Electrification, autonomous driving, diverse mobility, and connectivity are trends that are changing the industry's rules. Among all decisive topics revolutionizing cars in the next future, Silicon Mobility is committed to supporting 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 for the automotive industry used to increase energy efficiency and reduce pollutant emissions while keeping passengers safe. We are looking for a motivated candidate to join our company in Sophia-Antipolis on the French Riviera. Please contact us: **internship2023@silicon-mobility.com**
Offer ref.	SM-STC 009-2023
Subject – Offer title	Embedded Logic Analyzer Support
Duration	2/3 months – between June and September 2023
Work hours	35 hours per week, internship location at Silicon Mobility office
Education	Penultimate year of Master or Engineer Electronic School (BAC+4 or equivalent)
Content/ mission	As part of the development of its product offering, Silicon-Mobility has developed a new SOC (System On Chip) prototype. This SOC embeds a new debug solution called ELA (Embedded Logic Analyzer) which allows the user to trace hardware signals inside the chip. This ELA is an ARM® solution that can be configured through a Lauterbach® environment (the leading debug environment in the industry). The proposed internship addresses the need for the user of this new feature to easily configure it. Thus, the goal of the internship is to develop a graphical interface inside the Lauterbach environment to configure the ELA. The following activities will be carried out during the internship: • Analysis of the role of the ELA in the SOC and the debug environment. • Discussion with the system team to design the interface and write a user guide. • Develop test cases to test various ELA configurations. • Develop the interface itself (this will be done using the Lauterbach scripting language - knowing this language is not required) This internship will be particularly interesting for the intern who will practice on a real SOC on a test board. Thus, this is a very good way to take a first step in the embedded system world.
Profile and skills 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. • A good foundation in embedded software development will be appreciated. • Knowledge of the C language. • A knowledge of the VHDL or Verilog language is a plus. • The qualities of autonomy, rigor, and ability to work as a team are important. • A good level of English is required.
Skills developed during the internship	• Debug environment (Lauterbach) and ELA. • Embedded software development in C.

	• ARM® AMBA protocol. • Use of configuration management tools (SVN) • Knowledge development on Systems on Chip (SoC) • Potentially: RTL simulation tools (Questasim).
Remuneration	From 1400€/month + Lunch tickets + 50% of public transport