

Silicon Mobility

Internship Description

Cybersecurity use cases development
on automotive controller chip
(SM-STC005 / 2023)

What we offer

Company	<p>SILICON MOBILITY SAS (<i>immatriculée 815 085 659 000 28 RCS Grasse</i>)</p> <p><u>Siege social</u> : Les Aqueducs – Bât 2 – 535, route des Lucioles – 06560 Valbonne Sophia-Antipolis</p> <p>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.</p> <p>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.</p> <p>We are looking for a good candidate to join our R&D team working in Sophia-Antipolis on the Côte d’Azur. Please contact us: internship2023@silicon-mobility.com</p>
	Offer ref.
Subject – Offer title	Cybersecurity use cases development on automotive controller chip
Duration	6 months – between February/March/April and September 2023
Work hours	35 hours a week at Silicon Mobility office
Education	Last year of Master (BAC+5 or equivalent)
Content/ Mission	<p>Silicon Mobility is actively working on its semiconductor product roadmap. The internship consists in analyzing, defining, and developing use cases highlighting the usage and benefits of a hardware security module embedded into an FPCU System-on-Chip</p> <p>The project contains 3 phases:</p> <p><u>Introduction</u></p> <ul style="list-style-type: none"> • Analyze the FPCU System-on-Chip and understand the hardware security module general system features • Study the boot ROM of the hardware security module • Study the firmware of the hardware security module • Study the cybersecurity module chain of trust <p><u>Development</u></p> <ul style="list-style-type: none"> • Implement the hardware security module chain of trust use cases • Define and implement the firmware backup use cases • Implementation the service requests at the application processor level • All use cases will be described in detail in a document • Execute and debug the hardware security module use cases in an RTL simulation environment and/or on the FPCU
Profile required	<p>For this internship, we are looking for a candidate with good knowledge of embedded systems and embedded C programming. Knowledge of encryption, digital key management and cybersecurity principle is a plus.</p> <p>RTL simulation will be also an advantage.</p>



	<p>Good skills in Hardware design for embedded system would be appreciated. The good candidate will be autonomous, rigorous with a strong team spirit. English speaking is required.</p>
<p>Expected skills/ knowledge</p>	<ul style="list-style-type: none"> • Embedded C coding • Cybersecurity and encryption • Real-time software constrains • RTL simulation and FPGA debug
<p>Remuneration</p>	<p>1400€/month + Tickets Restaurant</p>