

Silicon Mobility

Apprenticeship Description

Low Level Drivers Development and Test (*SM-STA003 / 2022*)

Description

Company	<p>SILICON MOBILITY SAS (numbered 815 085 659 000 28 RCS Grasse) <u>Head office</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 supporting 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 French Riviera. Please contact us: internship2022@silicon-mobility.com</p>
Offer Number	SM-STA003-2022
Project Title	Low Level Drivers Development and Test
Period	12 months – from September 2022 to September 2023
Working hours	35 hours a week at Silicon Mobility office
Income	From 1300€/month + Tickets Restaurant
Student level	Last year of Masters (BAC+5 or equivalent)
Project Description	<p>Silicon Mobility is developing its next generation of OLEA FPCU. Our control chip embeds ARM processors and HW resources dedicated to automotive real-time control applications with safety, security, and communication features.</p> <p>The candidate’s responsibility consists of defining, developing, and testing several device drivers within the low-level driver layer (memory controllers, clock manager, watchdog, SPI, CAN, USART, etc...). These embedded software modules offer services needed to run the functional part of the upper software layer (system/application).</p> <p>This project will be divided in 3 main phases: <u>Ramp-up:</u></p> <ul style="list-style-type: none"> • Analyse and understand the OLEA® FPCU and its components. • Driver development and test methodology. • Understand the development environment. <p><u>Driver test (This step will help the intern to gain system on chip experience before the driver development):</u></p> <ul style="list-style-type: none"> • Define and write the tests scenarios (C code). • Tests execution and debug RTL simulation on the hardware target. • The intern will gain System on Chip knowledge, debug, and embedded C coding capacities. <p><u>Driver development:</u></p> <ul style="list-style-type: none"> • Study and understand the module functionalities (communication, dedicated features, and safety modules). • Define the software requirements, the driver architecture and refine it into a more precise description of the functions to be developed. • Code implementation in embedded C.
Profile	<p>We are looking for a candidate with strong knowledge of embedded systems and embedded C programming. RTL simulation and FPGA prototyping skills will be also an advantage.</p> <p>Good skills in Hardware design for the embedded system will be also appreciated.</p> <p>The candidate must be autonomous and rigorous with a good team spirit and a good English level.</p>

