# **Senior Firmware Engineer**

**About CML**

Cambridge Mechatronics Limited (CML) is a high technology design and engineering company based in the historic university town of Cambridge in the United Kingdom. We work with well-known manufacturers across the world and specialise in pioneering and developing cutting-edge shape memory alloy (SMA) technology from concept to mass production. We achieve this through technology licensing and partnerships with global manufacturing corporations.

Among our 100+ granted patents is a platform technology that allows the control, positioning and movement of smart materials with high precision. CML’s SMA motors are smaller than a human hair and can be positioned with the accuracy of the wavelength of light. We are the only company in the world to master and control these materials with exceptional accuracy.

Along with offering variety day to day in a stimulating and exciting environment we also (unlike working for a consultancy) bring products to market, seeing the entire process through from inception through to mass production which provides a real sense of achievement for our team.

**The Person**

We are looking for a dynamic and ambitious senior firmware engineer to join our growing team of world-class electronics, control and firmware engineers who will make their mark on our smart actuator technology. The role will report to the Electronics Director, who heads up our team developing leading edge electronics and control solutions for our technology.

We are looking for someone who is passionate, interested and interesting. You will need to be able to play a significant role in a highly skilled team, prioritising activities, balancing long and short term objectives and finding efficient ways to solve problems. The role involves some travel to Asia and America a to support the development of our actuator technology and solutions.

**Main Responsibilities**

* Work within the team of mechanical, control, electronics, firmware and performance engineers at CML to build on the proprietary SMA control algorithms that CML has developed to meet the needs of the market.
* Specify, develop and evaluate embedded firmware solutions to drive our actuator technology, and support transfer of these into high volume production.
* Develop and improve the methods and procedures to enhance our ability to deliver successful products.
* Interface with CML’s partners and customers to understand their requirements and to deliver the assistance that they need to use our products.

**Skills, Qualifications and Experience:**

* 1st Class or 2:1 BSc or BEng in Electronic Engineering or other relevant degree course
* 5 years’ demonstrable industrial experience and achievements
* 5 years’ experience in embedded programming of microcontrollers
* 5 years’ C/C++ development
* Designing to requirement specifications
* Creating technical documentation
* Writing specifications
* Experience in mentoring more junior engineers
* Defect tracking and peer review

**Desirable experience:**

* Use of Python
* Digital signal processing (DSP)
* Board-level debug and test
* Use of oscilloscopes
* System-level architectural design

**Other skills of interest:**

* MatLab or Simulink experience
* Assembler-level programming
* Appreciation of Agile development methods
* Test Driven Development (TDD)
* Closed loop control system design and development
* Transferring new technology into mass production
* Design for manufacture
* Appreciation of mechanical design

**Personal Skills**

You must also be able to demonstrate you are a strong team player, and that you can effectively interact and work with other technical teams. Strong analytical skills and a passion for technology are also expected.

You must also be self-motivated, able to prioritise activities and have excellent problem-solving and decision-making skills.

You must be able to demonstrate experience working in a fast-paced environment, able to assimilate information and requests from customers and partners, and be comfortable with customer-facing interaction.

You should also be able to mentor junior engineers.

**CML Offers**

We have roles that you can help define and mould to your skills and ambitions within a multi-disciplinary team. We are happy to accommodate individuals with different skill sets and you will have the opportunity to make an important contribution to a dynamic and fast growing company with a global reach. Your salary package will be very competitive and dependent upon relevant academic and industrial experience.