



Senior Embedded Software Engineer

Job Specification

HR-JS1701

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1 Outline

Job Title:	Senior Embedded Software Engineer	Salary:	£38,000 - £45,000
Location:	Flintshire, North Wales, with occasional off-site work	Type:	Permanent
Hours (per week):	37.5 hours	Holiday Entitlement:	25 days plus public holidays
Reports to:	Technical Director		

ALL APPLICANTS MUST BE ELIGIBLE TO WORK IN THE UK.

2 Company Overview

Situated just 12 miles West of the city of Chester, based in Flintshire, North Wales, Taylor Dowding Innovation Ltd (“TDI”) provide electronic product development and specialist technical consultancy services to clients throughout the UK and overseas. We plan, create and deliver outstanding high-performance, cost-effective and robust leading-edge technology products.

Our engineering team has many years of experience in developing highly innovative electronic products for both consumer and professional markets. Product applications include networked video cameras and recorders, homeland security, payment security, professional audio, oil and gas, digital broadcasting and environmental monitoring. Technologies used within these products include analogue and digital electronics, processors ranging from low-power micro-controllers through to high-end video DSPs, battery power management, specialist sensor interfacing and high-speed wired (e.g. Gigabit Ethernet, HDMI, SATA, USB) and wireless interfaces (e.g. Bluetooth Classic and Bluetooth Low Energy; Wi-Fi; ZigBee).

We provide a holistic approach to electronic product development; design and manufacturing support services cover the full product lifecycle from proof-of-concept prototypes to volume production, including professional guidance to achieve global regulatory compliance and certification.

3 Position Overview

This permanent position of Senior Embedded Software Engineer has arisen as part of a planned expansion of the business to support increasing demand for the company’s professional services from a continually broadening customer base.

Primarily this position is responsible for designing embedded software for electronic products used in diverse applications and various market sectors. The role involves a significant amount of customer and supplier contact and the ability to communicate effectively is paramount.

This position is ideal for someone who is keen to develop their technical skills further; take on some of the day-to-day role of managing their own time and the often demanding workload; and play a part in the continued development and expansion of the company.

The ideal candidate will have a sound understanding of embedded software and hardware design principles backed up by good experience; show flair and independent thinking; and the ability to contribute immediate value to the company and its development.

4 Main Duties

- Design and implement reliable and efficient embedded software/firmware solutions that meet specified requirements for both external client and internal R&D projects.
- Design and implement high-quality embedded software device drivers and test routines to support efficient and effective commissioning and debugging of new hardware platforms.

- Apply appropriate software design strategies to achieve compliance with relevant regulatory certifications, including intrinsic safety approvals or safety-critical applications.
- Contribute to and support the design and implementation of reliable, efficient and cost-effective electronic (analogue and digital) hardware solutions for external client or internal support projects.
- Debug, commission and test board level designs in conjunction with associated embedded firmware driver development.
- Create technical documentation and manuals.
- Assist with standards approvals documentation and testing, e.g. for EMC.
- Assist team members in the day to day management and workflow of projects and individual designs.

5 Academic Qualifications

Essential: A good degree or HND in Electronics or closely-related discipline from a well-regarded educational institution.

6 Technical Skills/Experience

Essential: A proven track record in embedded software development for Electronic Products across a broad range of commercial market sectors including direct involvement with the full product development lifecycle from prototype development to production release and ongoing design maintenance and support.

Essential: Experience of software development for 8-bit to 32-bit embedded processors (C/C++) including device driver development, HAL development and familiarity with commonly used software tool chains and debug tools.

Essential: Familiarity of developing solutions using embedded RTOS.

Essential: Experience of software development for use with a broad range of electronic technologies, including high-speed digital circuitry and low-power analogue circuitry, to be applied in end products for both consumer and industrial markets.

Essential: Experience of devising high-performance, cost-effective software architectures, including well-developed strategies for creating optimised hardware/software design partitioning.

Essential: Extensive use of software tools for embedded software development, including version control, continuous integration and issue tracking systems.

Essential: Experience of commissioning and debugging hardware and software on newly-developed embedded platforms, with a demonstrable record of analytical fault identification and rectification, and familiarity with electronic test equipment, including oscilloscopes and logic analysers.

Highly Desirable: Experience with ARM Cortex architectures, especially Mx series.

Highly Desirable: Experience of software design and standards/protocols for wireless, communications and multimedia applications.

Highly Desirable: Experience of developing user space and kernel software for embedded Linux.

Highly Desirable: Practical experience of other commonly applied software languages, eg Java and Python.

Highly Desirable: Experience with implementing functional safety standards, e.g. IEC61508.

Desirable: Experience of agile software development methodologies.

Desirable: Experience of specifying and maintaining design support tools (eg version control and issue tracking systems) for software (and ideally hardware) development processes.

Desirable: Experience of software development for PC and/or mobile platforms (Android and/or iOS).