



DRIVING THE FUTURE OF ELECTRIC VEHICLES

We are the world leader of in-wheel motors for passenger cars, light commercial vehicles and future transport solutions.

Protean Electric is an automotive technology firm with over 150 talented people globally. Our mission is to drive sustainable transport through innovation, and we are the imagination behind vehicles that travel further, perform better and use fewer components.

We believe that freedom of ideas, integrity of response, desire to improve, and collaborative thinking drive innovation. Joining Protean means working with talented experts across the organisation who value your ideas, empower you to make a difference, and encourage you to challenge yourself and others.

Senior Automotive Systems Engineer

Farnham, UK

The Role

We are seeking the right individual to join our Systems Engineering team.

Main Duties & Responsibilities

The Senior Automotive Systems Engineer will take responsibility for the System Specification for the next generation of Protean's innovative In-Wheel Motor products.

The ideal candidate will have experience of ISO-26262 and its application to E/E systems and be comfortable working with teams across the business to refine the functional safety concept for the product. To enable this, candidates will have significant experience in the automotive industry and ideally some experience of hardware/vehicle and/or mechanical design for 3-phase permanent-magnet synchronous drives.

This role requires the application of model-based systems engineering (MBSE) principles to define the system-level architecture of the product, as well as support and document design trade-offs. Therefore, candidates should ideally have some experience using semi-formal modelling notations such as SysML and ideally experience with tools such as Sparx Enterprise Architect, or IBM Rational Rhapsody. The role will on occasion need to make use of tools such as MATLAB/Simulink to support the modelling of dynamic systems and support requirements specification.

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As the role will require the specification of system requirements, candidates will have requirements management experience, ideally with a tool such as Polarion, DOORS or Jama and be familiar with change management processes. Understanding the importance of SMART requirements and acting as an advocate for their implementation within a project is also a requirement.

As the project enters its later stages, the role will support design verification through the specification of test cases and the review of test results.

Reporting, Location & Travel

This role reports to the Systems Engineering Manager and has no direct reports. The role is based in Farnham, Surrey with some flexibility for home working.

Key Responsibilities

Responsibilities include, although are not limited to the following:

- Stakeholder requirements analysis
- Functional analysis and development of system, hardware and software requirements
- Requirements baseline management, traceability and verification
- Execution/coordination of analyses to confirm compliance to requirements
- Production of relevant safety work products including specifications and reports
- Work with other engineering disciplines to develop robust technical solutions and maintain Architecture definitions and trade-off analysis
- Analyse test results, support change management and provide dispositions on non-compliances
- Contribute to risk assessment and contribute ideas to improve schedule and/or reduce cost

Relevant Skills & Competencies

We welcome and encourage behaviours in line with our 'Values in Practice:

- **Will to Win:** we succeed by delivering to customers; on time, on quality and on cost
- **Pioneering:** we are passionate about the technology
- **Courageous:** we face our challenges
- **Working Together:** we can rely on each other and others can rely on us
- **Personally Responsible:** we do what needs doing, when it needs doing
- **With Integrity:** we are honest, open and respectful

Successful candidates should be able to demonstrate the following relevant skills and competencies:

- Excellent interpersonal skills
- A good communicator
- Strong problem solving skills
- Attention to detail
- Drive for continuous improvement
- Successfully present technical information
- Ability to self-motivate and work under pressure and time constraints with minimal oversight

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Relevant Knowledge & Experience

Candidates should assess their suitability against the following essential and/or desirable relevant knowledge and experience:

Essential:

- Proven experience of systems design for embedded systems in industries such as Automotive, Aerospace, industrial control or Communications
- Familiarity with ISO 26262, IEC 61508, DO-178B or similar safety standards
- Deriving, analysing and managing requirements
- Defining and developing systems architectures and performing trade-offs
- Able to work as part of a multi-function team
- Successfully presents technical information

Highly Desirable:

- Significant automotive industry experience
- Experience working with high power electric and hybrid powertrains
- Familiarity with Sparx Systems Enterprise Architect, IBM Rhapsody or similar UML/SysML tool
- Experience of electric motors and the associated control systems
- Knowledge of Matlab and Simulink
- System verification and testing experience
- Experience of hardware and software development for safety related systems
- Familiarity with Automotive SPICE or similar process model

Employee Benefits

In return for a rewarding and fulfilling career, all Employees can look forward to receiving a competitive salary, plus a number of additional employee benefits:

- **Core hours***: we offer a flexible approach to working hours in the office, with core hours available to all Employees, requiring them to be in the office between 10:00 and 16:00 each day, from Monday to Friday. This provides Employees with the flexibility to start work, and finish work at a time that is convenient to them providing a little more freedom to take into account the journey to work and family commitments.
- **Performance Bonus**: Employees are eligible to receive a discretionary bonus of up to 15% of annual salary; this is paid annually and is subject to the company meeting its agreed performance targets.
- **Life Assurance**: Employees are automatically enrolled into the company's Life Assurance scheme; this provides the sum of four times annual basic salary in the event of death during employment.
- **Pension Scheme**: Employees are automatically enrolled into the Company's Group Personal Pension Scheme, with the company matching contributions from a minimum of 5% up to a maximum of 7%.
- **Private Healthcare**: subject to completion of probation, Employees, their partners and dependents, are able to join the company's private healthcare scheme with BUPA, in addition to an accompanying cash plan with BHSF.
- **Learning & Development**: Employees are encouraged to continue their career development with a variety of training courses and development opportunities available to them, including the offer of learning Mandarin*.
- **Relocation**: we are able to offer a relocation package to assist Employees and their families when relocating to within a designated distance/duration from the company's offices.

Full details of the Employee Benefits are available upon request, or will be made available on provision of an offer of employment.

*(please note that the items marked with an asterisk * are currently suspended as a result of the ongoing pandemic)*



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Should you wish to apply for this role, please e-mail your CV, covering letter and salary expectations to: ukjobs@proteanelectric.com – please be sure to **quote the full Job Title in the subject line** and read our Privacy Notice.

Thank you for your interest, we wish you every success with your application.