



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 100 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.

Principal Power Electronics Engineer

Farnham, UK

The Role

We are seeking the right individual to join our Power Electronics team.

Main Duties & Responsibilities

Principal Power Electronics Engineers are the technical authorities in power electronics design and shape the architectures of electronic projects in the in-wheel motor range. As experts in the field they will also provide mentoring and direction to other Electronics Engineers in the team.

Reporting, Location & Travel

This role reports to the Electronics Manager and is based in Farnham, Surrey with an occasional requirement for national and international travel, including to China.

Key Responsibilities

Responsibilities include, although are not limited to the following:

- Full life cycle design from initial concept through to production
- SMPS, PSU and inverter design and development
- Simulation, calculation and circuit design
- Writing design specifications and reports
- Leading validation and verification activities
- Leading design reviews
- Verification, characterisation and validation testing of electronics

Cont/...

Key Responsibilities Cont/...

- Writing characterisation and validations test specifications and test reports
- Actively participating in international conferences and meetings
- Building and maintaining relationships with leading suppliers of power electronics components to ensure good knowledge of relevant technology developments
- Working in accordance with Protean's Electronics Team Processes as well as Development Process and Business Management Process
- Supporting manufacturing activities in the UK and China

Relevant Skills & Behaviours

We value and measure ourselves against the following 'Best-Self' Behaviours:

- Pioneering
- Driven
- Tenacious
- Collaborative
- High Integrity
- Responsible

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

- Technical leadership
- Pragmatic problem solving
- Attention to detail
- Innovative lateral thinking
- Willingness to be hands on
- Strong communication
- Drive for continuous improvement

Relevant Knowledge & Experience

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

Essential:

- Masters degree in Power Electronic Engineering or similar
- Extensive experience in design and analysis of inverters for electric motors
- Test and evaluation of power electronics systems
- Electrical and thermal modelling and simulation
- Multiple journeys through complete development life cycles
- Design for EMC
- Design for Manufacture

Desirable:

- Experience in an automotive OEM or Tier 1 supplier
- Familiarity with relevant automotive legislation, standards and guidelines
- 10kW to 100kW, 200 to 800V inverter design and the ability to work from a blank page
- Expert in component stress and de-rating and reliability estimation
- Design for functional safety to ISO26262
- Familiarity with Mentor Graphics PADS and DxDesigner (Altium also desirable)
- Using and applying DFMEA
- Understanding of automotive power-train components



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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, 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.
- **Discretionary Bonus:** Employees are eligible to receive a discretionary bonus of up to 15% of annual salary; this is paid annually and is subject to meeting set agreed 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.

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.

