

## JOB ADVERTISEMENT

**Job Title:** Power Electronics Systems Architect

**Purpose of Job:** PPM's Power division is growing its product base with innovative new technologies for the low carbon vehicle market. The Power Electronics Systems Architect will define, specify, and architect a wide range of power converter products, and ultimately demonstrate compliance to customer's needs.

**Location:** Swindon

**Reporting to:** Technical Director

**Role:**

This role is responsible for the design and test of a new range of high power dense silicon carbide switched mode power inverters; developing the next technological step for advanced wide-band gap motor control systems. PPM has successfully developed converters with a power density >100kVA/litre and are now working to deliver this system to platform integrators. As a successful candidate you will support our customers in developing these novel and innovative solutions; working within a specialist development team to define and model our future power electronics products.

The role will include, but not be limited to:

- Feature specification, functional design, and interface control
- Design of power switch component topologies and associated control circuits
- Design of test methods to assess solution viability
- Drafting of technical proposals for new power market applications
- Integrated product test and completion of factory acceptance reports.

As part of the Engineering team, you will have a high level of technical autonomy when defining and proposing solutions, but will also be required to work as part of a larger team when developing a final product implementation. This role is expected to apply a holistic view to the product design through attendance at, and contribution to, circuit level design reviews. You will also help to define and monitor the technical work packages allocated to a project delivery team, review and approve documentation, component specifications, and internal technical procedures.

PPM operates within a tight-knit network of partner organisations, bridging the gap between device packaging experts and real world applications. The power electronics systems architect will engage in developing:

- Embedded dies for power electronic circuits
- Power systems in excess of 5kW
- Wide bandgap sensor interface circuits
- Power systems for brushless DC & switched reluctance electric motors.

**Skills / experience / qualifications:**

It is *essential* the candidate has:

- Degree qualification in electronic engineering
- Knowledge of power electronic devices (SiC / GaN), circuit topologies, & control systems
- Strong understanding of electronic circuits and sub-systems
- Design and test experience of power electronic converters (AC:AC / DC:DC / DC:AC)
- Experience in using some simulation tools e.g. PLECS, Saber, Simetrix, Spice, Matlab
- Ability to design experiments and build prototypes to influence system design