Position Description

Position: Hardware Engineer
Department: Engineering
Reports to: Power Conversion and Hardware Team Leader
Direct Reports: None

Role Purpose	As a Hardware Engineer, you will leverage your specialised skills to work through multiple, simultaneous, and unique product design and development situations that can have a high degree of complexity. You will play an active part in the planning of current and future products as well as relevant quality checks throughout the development process to verify they conform to specification. You will also provide leadership, coaching, support, and development of team members across engineering at as technical level.
Key Success Outcomes	• Maintain clear communication and alignment with internal and external stakeholders, ensuring evolving needs and expectations are met. • Deliver innovative, reliable, and efficient designs that meet product functionality, manufacturability, compliance, and usability standards. • Identify, prioritise, and execute tasks across the entire development life cycle from requirements capture to design integration, verification, and customer validation. • Successfully manage tasks throughout the development lifecycle, from requirements gathering to customer validation, ensuring on-time delivery. • Consistently produce clean, efficient, and scalable designs that optimize cost without compromising quality. • Leverage data-driven insights to refine designs and processes, ensuring alignment with industry trends and the latest technologies. • Identify and escalate issues or risks promptly, mitigating potential impacts on timelines or deliverables. • Follow and improve hardware and software development processes, ensuring compliance with industry standards and best practices. • Actively contribute to the success of the R&D team by sharing expertise, providing constructive feedback, and supporting peer projects. • Enhance quality assurance through rigorous peer reviews, testing, and integration processes, maintaining high standards across all deliverables. • Provide timely support and updates for existing product designs, addressing issues efficiently to minimise disruptions.
Key Internal Relationships	• Sales/Marketing team, Product Management, Project Management • Engineering teams including CAD Services, Systems, Compliance and Software and Control. • Operations team including manufacturing, sourcing, logistics. • Other Enatel departments as required
Key External Relationships	• Customers • Third party manufacturers & other suppliers • Contractors

Key Requirements

Accountability Area	Desired Outcome/Achievement Indicators
Working with Internal and External Customers	• Fully understand the internal and external customer relationships and requirements. • Understands stakeholder needs and expectations and monitors for changes in stakeholder requirements. • Manage stakeholder expectations at all levels of the business.
Product Design, Verification and ongoing Support	• Determine feasibility by evaluating analysis, problem definitions, requirements, and alternative solutions. • Develop and maintain high quality designs and architecture across multiple products and product families, including product functionality, reliability, design for manufacture, test & compliance, ease of use and maintainability. • Develop and maintain cost-effective solutions by producing clean, efficient designs. • Review and improve designs using data from multiple sources (e.g., RMA, production and test yield etc.), ensuring all designs are up to date and aligned with the latest technologies. • Escalate issues and risks in a timely manner. • Work to plan and commit to schedule. • Support, modify, enhance, and maintain existing Enatel product designs including timely resolution of any Product Holds.
Design Lifecycle Management	• Conform to hardware and software development processes, tools, and standards (including design, documentation, environment, change and configuration management standards) while continuously improving on them throughout the entire design lifecycle. • Continually improve and review quality control processes, including relevant standards, peer review process, testing, and integration processes.
Research and Development	• The Hardware Engineer will at times contribute to the Research and Development Team. As a contributor of this team, you are expected to take an interest and give input and advice into projects being worked on by other members of the team.

Other duties:

- Upholds the company values.
- Perform any other tasks as required by your Team Leader and/or the business.
- Contributes to the achievements of department goals and objectives.

Health & Safety:

- Ensuring all Health & Safety policies and rules are followed, with all tasks completed in a safety conscious manner.
- Maintaining a safe and clean working environment by complying with Enatel Policy and Procedures.
- Leads by example in all matters relating to Health & Safety.

Environmental:

Enatel is committed to minimising the environmental impact of our operations and products.

- Ensuring Environmental policies and processes are followed.

Person Specification:

	Essential	Desirable
Competencies	• **Functional/Technical Skills** - has the functional and technical knowledge and skills to do the job at a high level of accomplishment. • **Action orientated** - enjoys working hard and is full of energy for the things he/she sees as challenging. • **Process Management** – good at figuring out the processes necessary to get things done. Can simplify complex processes. • **Learning Agility** - the ability to learn quickly in a new environment. • **Problem Solving** – looks for opportunities to resolve issues and solve problems. Learns quickly when facing new problems. • **Integrity and Trust** – is seen as a direct, truthful individual; is widely trusted. • **Ethics & Values** - Has an appropriate and effective set of core values and beliefs, and acts in line with those values at all times.	
Skills, Experience & Knowledge	4+ years proven experience in hardware development. Demonstrated competency, supported by knowledge and experience in the following: • A Power electronics background, including experience with Buck-Boost, Flyback, SEPIC/Cuk, DAB and LLC. • Further experience in Magnetic Design – Inductor, Transformer, Material Selection, Parametric Design. • Designing and building hardware solutions that have been delivered to customers on time, to budget and to the required quality standards (includes scope).	FPGA/CLPD design (VHDL or similar). Battery and battery pack design using various battery technologies (including lithium cells). Wireless power transfer Design for harsh environments (including vibration and water/dust ingress) Functional safety (including FMEA, redundancy and mitigations)

	• Simulation tools (LtSpice, Tina, QSpice), Mathcad (Maxima, Scilab, Python), thermal, magnetic, and electric field FEA and project management techniques. • National and international regulatory frameworks including UL, RCM, CE, CEC, FCC and CB as well European directives (low-voltage, EMC, RED). • Altium. • Design for EMC/EMI and design for manufacture. • Hardware test and monitoring tools (oscilloscope, spectrum analyser and power meters). • Differing SMPS topologies, PCB layout for power solutions (including creepage and clearance distances) and SMPS design (closed loop control, amplifier / magnetics design and noise control). • Agile development tools and techniques including scrum and Kanban. • Configuration management and change control. • Electronics design, including the ability to understand and navigate electrical schematics. Ability to take a project from significant uncertainty in the early discovery phases through product launch. Good commercial and business acumen. Analytical mind with problem-solving aptitude. Ability to work independently. Excellent organizational skills.	
Qualification / Licenses	Degree in electrical / electronic engineering or equivalent vocational training.	Membership of a relevant industry body (e.g., IEEE)