

Position Description

Position: Firmware Engineer

Department: Engineering

Reports to: Power Conversion and Hardware Team Leader

Direct Reports: None

Role Purpose	<p>As a Firmware Engineer, you will leverage your advanced levels of practical, hands-on experience to work through complex situations that can have high degrees of uncertainty. 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 specifications.</p> <p>Your specific development focus will be AC/DC and DC/DC power conversion designs, but you will have experience in general power electronics design including knowledge around general hardware development and Wireless Power Transfer.</p> <p>You will also provide leadership, coaching, support, and development of team members across engineering at a technical level. This includes aligning, motivating, and inspiring our next generation of engineers.</p>
Key Success Outcomes	<ul style="list-style-type: none"> • Delivers high quality firmware that meets requirement specifications, project timelines, and budget expectations, with positive feedback from internal stakeholders and/or customers. • Actively identifies and implements improvements to design processes, tools, or standards, contributing to greater team efficiency and product quality. • Demonstrates consistent technical leadership through peer recognition, mentorship, and active participation in design reviews, technical discussions, or training initiatives. • Maintains regular, constructive engagement with project stakeholders to ensure alignment on project goals, priorities, and timelines. • Ensures project deliverables are communicated clearly and delivered on schedule through effective collaboration within cross-functional teams. • Builds and maintains a reputation as a trusted expert within the team and broader organization, evidenced by involvement in key decisions and cross-team initiatives.
Key Internal Relationships	<ul style="list-style-type: none"> • Sales/Marketing team, Product Management, Project Management • Engineering teams include Engineering Services, CAD Services, Systems Solutions and Power Management. • Operations team including manufacturing, sourcing, logistics • Other Enatel departments as required
Key External Relationships	<ul style="list-style-type: none"> • Customers • Third party manufacturers & other suppliers • Contractors

Key Requirements

Accountability Area	Desired Outcome/Achievement Indicators
Working with Internal and External Customers	<ul style="list-style-type: none"> Fully understand the internal and external customer relationships and requirements. Understands stakeholder needs and expectations and monitors changes in stakeholder requirements. Manage stakeholder expectations at all levels of the business.
Leadership	<ul style="list-style-type: none"> Lead team members through investigation, planning and implementation of design solutions that meet customer needs. Provide leadership coaching, support, and development of other team members across engineering. Identify and implement opportunities for improvement within the team.
Product Design, Verification and Ongoing Support	<ul style="list-style-type: none"> Understand user needs, align with different stakeholders, study systems flow and integration, define required work processes, and investigate any problem areas. 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. Identify, prioritise, and execute tasks across the entire development life cycle from requirements capture to design integration, verification, and customer validation. Develop and maintain cost-effective solutions by producing clean, efficient designs. Automate tasks through appropriate tools and scripting where appropriate. 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. Ensure all designs are up to date 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	<ul style="list-style-type: none"> 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.

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	<ul style="list-style-type: none"> • 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 they see as a 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. 	

<p>Skills, Experience & Knowledge</p>	<p>4+ years proven experience in firmware development of embedded products and associated systems, including experience with AC/DC and DCDC technologies</p> <p>Full competency, supported by knowledge and experience in the following:</p> <ul style="list-style-type: none"> • Designing and building hardware and software solutions that have been delivered to customers on time, to budget and to the required quality standards (includes scope). • Digital embedded control systems. • Selected programming languages (C, Assembler). • Various embedded operating systems including freeRTOS. • Simulation tools (LtSpice, Tina, QSpice), Mathcad (Maxima, Scilab, Python), thermal, magnetic, and electric field FEA and project management techniques. • Altium. • Hardware / Software 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. • Source control, including configuration management and change control. • Electronics design, including the ability to understand and navigate electrical schematics. <p>Ability to take a project from significant uncertainty in the early</p>	<p>FPGA/CLPD design (VHDL or similar).</p> <p>Battery and battery pack design using various battery technologies (including lithium cells).</p> <p>Design for harsh environments (including vibration and water/dust ingress)</p> <p>Functional safety (including FMEA, redundancy and mitigations)</p>
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	<p>discovery phases through product launch.</p> <p>Strong commercial and business acumen. Good financial, reporting, and quantitative skills.</p> <p>Analytical mind with problem-solving aptitude.</p> <p>Ability to work independently.</p> <p>Excellent organizational and leadership skills.</p>	
Qualification / Licenses	Degree in electrical / electronic engineering, software engineering or equivalent vocational training.	Membership of a relevant industry body (e.g., IEEE)