enatel®

Position Description

Position: Senior Embedded Software Engineer
Department: Engineering
Reports to: Back-End Software Engineer Lead
Direct Reports: None

Role Purpose	As a Senior Embedded Software Engineer, you will leverage your specialised skills to. support a variety of complex product design and development projects, working effectively in dynamic environments with shifting requirements. 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. In addition, you will provide technical leadership across engineering, offering mentoring, coaching, and support that empowers and inspires emerging engineers to grow and excel.
Key Success Outcomes	- Delivers high-quality software that meets functionality, performance, and reliability goals while delivering to agreed timelines. - Consistently improve and uphold quality control practices, including coding standards, peer review processes, unit testing, and continuous integration of workflows. - Plan work effectively and meet agreed schedules, proactively communicating risks, delays, or changes. - Maintain and enhance existing Enatel products, resolving product holds efficiently and improve the reliability, maintainability, and longevity of legacy solutions. - Develop designs and system architectures that meet internal and external customer requirements and integrate cleanly across the system. - Understand user needs, system flows, and integration points, ensuring solutions align with organizational goals and technical feasibility. - Identify and escalate risks or issues early, contributing to clear decision-making and minimizing late-stage rework. - Drive continuous improvement, identifying opportunities to enhance tools, processes, quality, and team efficiency. - Collaborate effectively with cross-functional teams, supporting the functional lead with planning, prioritisation, and alignment across development streams. - Execute tasks across the development lifecycle efficiently, producing cost-effective, well-documented solutions that meet performance and reliability expectations. - The Senior Embedded Software Engineer is a contributor to the Research and Development Team. Actively engaging with team initiatives by taking an interest and providing meaningful input, advice and technical expertise to support high quality outcomes.

Key Internal Relationships	• Software and wider Engineering team • Sales, Marketing and Product team • Project Management • Operations team including Manufacturing, Sourcing, Logistics • Other Enatel departments as required
Key External Relationships	• Third party manufacturers & other suppliers • Contractors • Customers

Key Requirements

Accountability Area	Desired Outcome/Achievement Indicators
High-Quality Software Development	• Implement software that accurately reflects approved designs and meets functional, performance, and reliability requirements. • Follow established coding standards, architectural guidelines, and development processes. • Produce clean, maintainable, and well-structured code across all assigned work. • Contribute to improving development tools, standards, and practices.
Delivery and Planning	• Complete software development tasks on time, consistently meeting project deadlines, sprint goals, and agreed milestones. • Provide accurate estimates and break down work effectively to support realistic planning. • Manage personal workload, technical dependencies, and constraints to ensure predictable delivery. • Identify and mitigate delivery risks early, proactively escalating concerns before they impact timelines. • Collaborate with project leads, functional leads, and cross-functional teams to refine priorities and adjust plans when needed. • Communicate progress, risks, and changes clearly and in a timely manner to ensure shared alignment.
Product Reliability and Maintenance	• Maintain and improve the reliability of existing Enatel products by delivering timely, high-quality fixes, enhancements, and optimisations. • Resolve product holds efficiently and thoroughly, ensuring long-term stability and reducing repeat issues. • Identify, diagnose, and address root causes of defects, contributing to sustained product quality throughout the lifecycle. • Proactively manage and reduce technical debt that impacts maintainability, reliability, or delivery timelines. • Ensure updates to legacy systems follow best practice, minimise customer impact, and maintain compatibility with established system behaviours.

	• Collaborate with cross-functional teams (Hardware, Systems, Test, Product) to assess reliability concerns and implement effective solutions.
Architecture and System Integration	• Contribute to software and system architecture discussions with sound technical reasoning. • Design solutions that integrate cleanly across firmware, hardware, and system interfaces. • Understand system flows, user needs, and cross-team dependencies when crafting solutions. • Ensure interface contracts are followed, and integration behaviours are well-documented.
Continuous Improvement and Quality Control	• Continually improve coding standards, peer review processes and quality control practices to uplift overall engineering maturity. • Implement strong unit-level testing and ensure code integrates reliably with CI/CD pipelines, collaborating with the testing team to support broader system-level validation. • Perform root-cause analysis on defects or integration issues and drive preventative improvements to avoid repeat problems. • Identify and implement opportunities to enhance team efficiency, tooling, and overall software quality. • Champion best practices across the full development lifecycle, setting a high technical standard within the team. • Contribute to the evolution of engineering processes by proposing, trialling, and embedding improvements that support scalable, sustainable development.
Risk and Issue Management	• Identify risks, constraints, and issues early in the development cycle. • Escalate concerns promptly with clear context and recommended actions. • Contribute to informed decision-making by highlighting technical implications and trade-offs.
Collaboration and Knowledge Sharing	• Work effectively with cross-functional teams to align on requirements, dependencies, and delivery goals, ensuring smooth integration across firmware, hardware, systems, and test. • Support the functional lead with planning, estimation, and prioritisation, contributing technical insight that improves decision-making and sequencing of work. • Share knowledge through mentoring, pairing, design discussions, code reviews, and active participation in team initiatives. • Actively engage in R&D improvement activities and contribute to a culture of shared ownership, continuous learning, and openness across the engineering group. • Provide valuable input to team projects and assist in problem-solving across R&D initiatives. • Foster a culture of collaboration and continuous learning within the team.
Documentation and Communication	• Produce clear, accurate documentation covering design intent, changes, and implementation details.

	• Maintain up-to-date artefacts throughout the lifecycle to support traceability and ongoing development. • Communicate progress, risks, and technical decisions in a timely and concise manner to stakeholders.
Customer-Centric Solutions	• Develop software that prioritises usability, reliability, and positive customer experience. • Incorporate customer feedback, field insights, and market requirements into design and technical decisions. • Ensure deliverables align with real-world usage and product expectations across customer environments. • Apply a customer-centric mindset, considering customer impact when prioritising work, resolving issues, or proposing improvements.

Other duties:

- Upholds the Enatel company values.
- Perform any other tasks as required by your manager 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
- Adhere to all health and safety policies whether at our Christchurch premises or abroad.

Environmental:

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

- For ISO 14001 EMS Certification, minimisation of environmental impacts to be considered in product design and development such as:
- Environmentally sustainable and recyclable raw materials and packaging
- Minimisation of packaging, energy use and logistics costs
- Materials are compliant as required by H&S and Environmental legislation, EU RoHS and REACH.

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 they see as challenging. • **Integrity and Trust** – Is seen as a direct, truthful individual; is widely trusted. • **Problem Solving** – looks for opportunities to resolve issues and solve problems. Learns quickly when facing new problems. • **Technical Learning** – can learn new skills and knowledge. Picks up on technical things quickly. • **Customer Focus** – Is dedicated to meeting the expectations and requirements of internal and external customers. Acts with customers in	

	mind. Establishes and maintains effective relationships with customers and gains their trust and respect. • **Process Management** – good at figuring out the processes necessary to get things done. Can simplify complex processes. • **Organising and Planning** - uses resources effectively and efficiently. Accurately scopes out length and difficulty of tasks and projects. Sets objectives and goals. • **Communication Skills** – able to communicate in a variety of settings and styles clearly and succinctly.	

Skills, Experience & Knowledge	• 7+ years embedded Linux software development experience.
	• A core base of technical skills including a combination of:
	  - Experience in modern C++ (C++17).
	  - Experience in scripting languages such as Lua or Python.
	  - Strong working knowledge of Atlassian tools including JIRA.
	  - Source control, including configuration management and change control.
	• A passion for producing stable, clean, maintainable code
	• Proficient understanding of source control software (eg Git, feature branching and rebasing) and Jira.
	• Familiarity with any Agile development methods
	• Familiarity with build tools and DevOps best practices
	• Familiarity with testing automation tools.
	• Ability to design and apply the continuous integration capability in a complex enterprise environment
	• Knowledge of software development life cycles and working in a team environment on new product development projects
		• Embedded device security.
		• Cloud development.
		• Familiarity with YOCTO builds an advantage
		• Experience with communication protocols (e.g. CAN)
		• Experience in embedded operating systems such as freeRTOS

Qualification / Licenses	• Relevant degree in electrical / electronic engineering, software engineering or equivalent vocational training.	