Systems Engineer (All Levels)

Position Description

Employment Type:	Full Time
Term:	Permanent
Group:	Engineering
Band:	Band 3 to 5, commensurate with experience and role
Location:	QuantX Labs, Lot Fourteen, Level 2 Space Lab, Frome Road, Adelaide
Reports To:	Systems Engineering Team Lead
Direct Reports:	None

Position Overview

At QuantX Labs, you'll be an integral part of an emerging, world-leading deep-tech product company with a strong and growing pipeline of work across Space, Defence and Commercial sectors. As a small, high performing team, QuantX Labs offers the opportunity to contribute directly to significant and globally relevant programs, where you make impact on sovereign capability and technologies that matters on a global stage.

You will play a practical, applied role in the development and delivery of next generation quantum and precision measurement products, working with cutting edge technology from concept through to product and deployment. This is a rare opportunity to collaborate closely with internationally recognised experts, and to see your efforts translated into advanced products used by global customers at the forefront of innovation.

The Systems Engineer plays a key role in the development and production of our QuantX products. Working within a multidisciplinary team environment, the role focuses on leading and supporting the delivery of products throughout the systems lifecycle, ensuring the effective realisation of system function and performance requirements.

Duties and Responsibilities

Systems Engineering	The following technical duties are expected of the role, appropriate to the employee's role seniority and experience: • Apply systems engineering principles across the systems engineering lifecycle in the development and industrialisation of QuantX Labs products • Collaborate with stakeholders to elicit, analyse, derive and capture system and sub-system requirements and interfaces, to meet the product definition • Contribute towards the development of system architectures • Analyse system performance data and implement improvements to optimise efficiency, reliability, and cost-effectiveness

	• Work closely with physics, software, electronics, mechanical, and production teams to ensure cohesive system design • Lead and support trade studies, design decisions and technology selection • Define and execute verification and validation tests to ensure systems meet design specifications and regulatory standards • Managing product requirements, developing verification and validation plans. • Managing complex product interfaces and Interface control documentation. • Plan and execute the integration of system components, resolving any issues to ensure correct interaction between all elements • Identify potential technical risks and develop mitigation strategies to minimise their impact throughout the product lifecycle • Establish and maintain configuration control and system baselines • Author and maintain comprehensive technical documentation • Provide technical leadership for technical reviews across the systems lifecycle
Other Assigned Duties	• Maintain product information pack, ensuring consistency and accuracy • Provide technical expertise and advice in support of business activities • Technically lead and support execution of projects • Work autonomously while collaborating effectively with the team and successfully communicate status with stakeholders • Mentor, support the growth development of team members • Contribute to business development and customer success activities • Comply with all company policies, procedures, and governance requirements, including safety, security, quality, and confidentiality obligations • Uphold the organisation's values, ethical standards, and commitment to excellence • Other reasonable duties as assigned

The responsibilities as specified above may be altered in accordance with the changing requirements of the position.

Experience and Skills

Experience	• Understanding of systems engineering principles across the full lifecycle, applied to the product development and production domain • Ability to analyse complex systems, decompose problems, and understand interactions between hardware, software, firmware, and operational elements • Working cross functionally with technical teams, including physics, software, electronics, mechanical, and production teams, to ensure cohesive product development and integration • Utilisation of systems engineering tools relating to requirements, design and test management such as Flow, PDM/PLM, Epsilon3 or similar. • Technical leadership and delivery of product development and production projects • Technical background in product development, industrialisation, analysis and production • Knowledge of product safety, security and assurance is desirable

Skills	• Professional integrity, accountability, and attention to detail • Work independently and collaboratively, seeking support when needed • Effectively adapt to evolving product requirements, product development environments • Solve problems and make informed decisions that balance technical, schedule, cost and quality considerations • Planning, work management and prioritisation of duties • Clear communication of technical concepts to both technical and non-technical stakeholders • Written skills for producing clear and concise technical documentation • Effective collaboration and knowledge sharing across teams • Commitment to quality, safety, and continuous improvement • Space systems experience is desirable
Other	• Bachelor's degree in an engineering, science or other related field. With deeper experience in a specific area (e.g. mechanical, electrical, physics, software) • Systems Engineering Certification such as INCOSE will be highly regarded