

Role Profile: Electronic Warfare (EW) Solution Architect

A bit about us...

Amiosec is a rapidly growing technology company, driven by innovation, agility and state-of-the-art technology. We collaborate with government customers and commercial providers to deliver cutting-edge research, technology, products, solutions and services across communications security, applied AI, electronic warfare and tactical communications sectors.

We offer a stimulating work environment where our developers have the opportunity to contribute to various projects, from early-stage proof-of-concepts using emerging technology, tools and languages to full lifecycle product development. We run self-managing teams using modern techniques – providing a sense of ownership and the ability to see your contributions impact the broader goals of the company and our customers.

As a people-centric organisation, fostering collaboration and nurturing talent are fundamental pillars of our culture. We actively cultivate an environment where sharing knowledge and ideas is not only encouraged but celebrated. Our regular Engineering Forum serves as an invaluable platform for exchanging tips, tricks, and techniques among our diverse teams and projects, facilitating continuous learning and growth, and we organise regular social activities to bring people together.

We are passionate and committed to growing new talent and as such run a Graduate Scheme and have an active STEM outreach program – working with schools and universities.

Our technical team is key to our success as a business and this not only includes what we do, but *how* we do it. Like any technical organisation we have standardised processes and ways of working, but these are owned by the team, and we work to ensure that they are relevant, helpful and as efficient as possible so that we can focus on what we're good at. We actively encourage our developers to contribute to improvements in our working practices and environment and regularly try out new ideas with a view to rolling things out that work well for us.

Our technical team is multi-disciplinary, covering architecture, systems, hardware, mechanical, FPGA, test and software engineering disciplines.

Typical Activities

Role Purpose	
<p>Amiosec and Penten have announced their intention to merge, creating a leading AUKUS cyber engineering and innovation business. The merged entity will combine significant capabilities across cryptography, Artificial Intelligence (AI), cyber defence, electronic warfare (EW) and tactical communications security.</p> <p>Following the merger, the newly formed company is strategically positioned to enhance its capabilities in electronic warfare and tactical secure communications. With both organisations bringing complementary expertise, the combined entity aims to drive innovation in next-generation defence technologies. To support this vision, the company is establishing a Solution Architect role dedicated to shaping and delivering cutting-edge solutions in EW and tactical communications with AI and Machine Learning at it’s core. This role will bridge technical innovation, customer requirements and operational deployment, ensuring the company’s solutions remain at the forefront of modern defence challenges.</p> <p>As battlefield environments become more contested, the ability to seamlessly integrate electronic warfare capabilities is seen a critical advantage for defence and national security. Equally with a growing emphasis on coalition operations, there is a need for interoperable, vendor agnostic solutions that support cross-domain mission success, by leveraging expertise from both legacy organisations, the company seeks to develop scalable, modular solutions that meet the evolving needs of defence and government customers.</p> <p>This new role is a pivotal step in driving technology leadership, operational effectiveness and strategic growth for the company in the rapidly evolving landscape of electronic warfare and tactical communications.</p>	
Stakeholders (Key Contacts)	BD Dir EW and Tactical Comms Product & Engineering Teams Customers

Subject Area	Key Accountabilities
Solution Design & Architecture	<ul style="list-style-type: none"> Lead the end-to-end design/implementation of electronic warfare systems, ensuring they meet technical, performance, security, and operational requirements. Develop and document comprehensive system architectures, ensuring alignment with the client's mission objectives and operational needs.
Requirements Analysis	<ul style="list-style-type: none"> Collaborate with stakeholders (including customers, engineers, and product managers) to gather functional and technical requirements for EW solutions. Ensure clear translation of customer needs into specifications.
Technology Integration	<ul style="list-style-type: none"> Evaluate and integrate emerging technologies, tools, and components (such as RF decoy systems, software defined radios, mission planning systems, and communication systems) to create optimal solutions for our customers.
Risk & Impact Analysis	<ul style="list-style-type: none"> Assess potential risks, identify technical challenges, and recommend mitigation strategies related to the integration and deployment of bespoke EW systems in operational environments.

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Subject Area	Key Accountabilities
Collaboration with Product and Engineering Teams	<ul style="list-style-type: none">• Work alongside systems engineers, software developers, hardware engineers, and other technical staff to ensure seamless integration and delivery of solutions for both trials and production environments.
Customer Interaction & Support	<ul style="list-style-type: none">• Engage with customers to provide technical guidance, conduct briefings, and offer post-deployment support. Work closely with customers to fine-tune system configurations and solve operational issues.
Compliance & Standards	<ul style="list-style-type: none">• Ensure solutions adhere to relevant defence industry standards, regulations, and security requirements, including compliance with international EW protocols and cyber security best practices.
Continuous Improvement	<ul style="list-style-type: none">• Provide continuous improvement strategies for system performance, scalability, and efficiency. Ensure solutions are adaptable to evolving threats and emerging technologies.• Identification of opportunities for growth and diversification of our capabilities.• Keeping abreast of new and cutting-edge technologies, tools and techniques as relevant to our business and development activities.

Due to the nature of our work, you'll need to obtain and maintain an appropriate security clearance.

Core Competencies

Subject Area	Competency
Business Acumen	<ul style="list-style-type: none"> • Knowledge of the business and key contributors to understand business situations, make sound decisions, and drive successful outcomes for the organisation.
Continuous Improvement	<ul style="list-style-type: none"> • Encourage experimentation and exploration of new tools, techniques, technologies, and approaches to enhance productivities, effectiveness and outcomes. • Proactively review and recommend enhancements for company products, processes, and workflows, contributing to ongoing optimisation and efficiency. • Leads on compliance with relevant legislation and identify and endorse opportunities to adopt new technologies and services.
Strategy	<ul style="list-style-type: none"> • Experience in articulating linkages between business and workstream strategies, ensuring all team members have clarity around what they are contributing to. • Understand and communicate industry developments, and the role and impact of technology.
Data and Analytical Skills	<ul style="list-style-type: none"> • Meticulous attention to detail. • Strong knowledge of how to elicit, specify, read, and interpret requirements. • Ability to take a very loose problem definition (often driven by a new and emerging need) and turn this into a clear solution and plan of work. • Ability to gather, interpret and present data to a wide range of stakeholders.
Qualifications and Experience	<ul style="list-style-type: none"> • Ability to demonstrate substantial experience in solution architecture, system design or related roles, with a focus on EW systems or similar defence technologies. • In-depth understanding of EW concepts such as signal intelligence (SIGINT), electronic attack (EA) electronic protection (EP) and electronic support (ES). • Relevant tertiary qualifications in engineering, computer science, business management or similar (desirable)

Technical Competencies

Subject Area	Competency
Solutions Architecture and Design	<ul style="list-style-type: none"> • Strong knowledge of EW systems and their use cases. • Experience in designing and architecting complex systems within defence or security domains. • Experience with system modelling, simulation tools and design software. • Good understanding of enterprise-scale architectures and how to structure solutions for scalability, maintainability and performance. • Strong knowledge of integrating disparate systems (e.g. software, hardware, cloud infrastructure, 3rd party services) into a unified architecture for a product or solution. • Good knowledge of common design patterns to create layered architectures and knowledge of how to apply these in practice. • Experience working with signal processing techniques for RF deception, such as frequency hopping, false target generation and advanced modulation techniques. • Strong technical writing and documentation skills to communicate complex system architectures, designs and deployment strategies.
Security Architectures	<ul style="list-style-type: none"> • Knowledge of security best practices such as secure software design principles, encryption, identity management and secure communication protocols. • Understanding of threat modelling to identify potential vulnerabilities and risks in the system and devise mitigation strategies.
User Insight	<ul style="list-style-type: none"> • The ability to bring knowledge of customers and end users to bear in conceiving and reviewing system designs, such that the outputs we deliver are the best possible fit for the various use case(s) in which they'll be used.
Compliance	<ul style="list-style-type: none"> • Familiarity with military-grade communication protocols and standards (e.g. NATO, MIL-STD). • Knowledge of standards and compliance aspects as applied to EW systems (whether purely software, or physical systems). E.g. regulatory compliance aspects such as Safety, EMC, environmental, as well as functional compliance standards – e.g. as required by Security Accreditors, evaluation bodies or defence organisations.

Behavioural Competencies

Subject Area	Competency
Communication	<ul style="list-style-type: none"> Communicates strategy and vision to the team and broader business. Communicates clearly with impact, articulating complex information and ideas to broad audiences with different viewpoints. Leads and encourages conversations to share ideas and build consensus on actions to be taken.
Integrity and Dependability	<ul style="list-style-type: none"> Resilient, with the ability to work in a fast paced and constantly changing environment. Lead by example, demonstrating a strong sense of integrity, ethics, dependability and high EQ. Ability to adapt to different cultural contexts and business environments. Takes the initiative to develop a wider breadth of knowledge across industry and/or business and identify and manage development opportunities in area of responsibility.
Analytical and Strategic Thinking	<ul style="list-style-type: none"> Strong analytical and problem-solving skills, with the ability to think strategically and make data-driven decisions. Creatively applies a wide range of innovative principles to realise business benefits aligned to the organisational strategy. Investigates complex issues to identify the root causes and impacts, assesses a range of solutions, and makes informed decisions on the best course of action, often in collaboration with other experts.
Customer Focussed	<ul style="list-style-type: none"> Strong understanding of the drivers of the business's customer base Ability to build, manage and maintain customer relationships even at times when difficult conversations are required. Identifies and evaluates potential improvements to products, practices, or services. Creatively applies innovative thinking and design practices in identifying solutions that will deliver value for the benefit of the customer/stakeholder.
Influence and Decision Making	<ul style="list-style-type: none"> Influential relationships with internal and external customers, suppliers and partners, including industry leaders. Leads on collaboration with a diverse range of stakeholders across and throughout the organisation.

Amiosec is committed to providing equality of opportunity for all. We aim to ensure our workplaces are free from discrimination and that our current and future colleagues, are treated fairly and with dignity and respect. Please inform us of any reasonable adjustments that we may need to make.

This role / position description is to serve as a guide. It is intended to be flexible and will continue to evolve over time with business needs and demands and may be updated periodically at the Company's discretion.