



Avionics Line Replaceable Units

Precision-Engineered Maintenance Training



Captec Subsystems Engineering delivered a suite of Avionics Line Replaceable Units (LRUs) for our customer's maintenance training system. These LRUs are designed to replicate the appearance, dimensions, and weight of standard units, enabling realistic installation within a representative airframe.

The customer, a global leader in aerospace and defence, provides advanced training technology solutions and software to clients worldwide. Specialising in training future maintenance engineers, they deliver tools and services that develop essential skills for maintaining both military and commercial aircraft.



The Challenge

To train the next generation of maintenance engineers for military and commercial aircraft, the customer required Generic Avionics Line Replaceable Units (LRUs) that accurately replicated real avionics equipment in size, weight, and function. Each unit needed to integrate with their training system's airframe and respond to the host computer to create a realistic operational environment. However, finding a provider capable of delivering comprehensive, end-to-end support was challenging.

Most suppliers offered only partial solutions, adding complexity and delays. The customer needed a single, accountable partner to manage design, fabrication, integration, and delivery seamlessly and reliably.



The Solution

Captec's approach involved the complete design, fabrication, and assembly of the LRUs to meet the customer's specific requirements. Each unit was crafted to accurately reflect the look, dimensions, and weight of typical avionics components, ensuring trainees would experience realistic, hands-on interaction with the units.

The LRUs were fully assembled with electro-mechanical components, enabling them to interface effectively with the host computer system. Each unit provided the necessary data connections and responses to support comprehensive training for maintenance operators, while the enclosures were fabricated to align with the customer's high-quality finishing and assembly standards.

The Outcome

The delivered LRUs provided an immersive, hands-on training experience, closely replicating real-world avionics systems in both function and form. Fully compatible with the customer's airframe training system, each unit enabled accurate interactions with the host computer, allowing maintenance trainees to engage with the equipment as they would in live operations.

By supplying a fully integrated, ready-to-use solution, Captec ensured a seamless fit into the training platform, eliminating assembly issues and optimising training effectiveness. This solution supports the customer's mission to develop skilled engineers, equipped with the practical experience essential for maintaining safety and reliability in aerospace.



CAPTEC

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