"Premio provided electronic manufacturing services that were proactive and technically sound. A huge improvement over our previous EMS provider"

Better equipment & improved PLM for security-screening agency

As the world's leading luggage security screening provider, the agency provides state of the art products, solutions, and services that meet the most demanding threat detection needs and improve operational efficiency.

Challenge:

Improve performance in harsh conditions & extend lifecycle

Poorly designed, the agency's off-the-shelf computers couldn't perform in their harsh operating environment, and they were seeing double-digit failure rates from intense heat, irregular power, and dust. This failure translated into a multi-million dollar annual servicing cost. Because their off-the-shelf computers had short product lifecycles, they frequently required configuration changes and incurred much higher costs of engineering, testing, and servicing logistics. Because of their government contracts, they needed at least a ten-year lifecycle, but also a perpetual product that could be continually updated, with no end-of-life (EOL). The lack of regulatory compliance and configuration control on their existing computer equipment affected the agency's ability to meet and compete for government contracts, and compete in the global marketplace.

Approach:

Premio builds robust new design & end-to-end PLM

The agency had previously worked with Premio for twelve-years, and beat out the competition for the project after a six-month qualification process. By identifying the root causes of each major failure mode on their previous computer equipment, Premio came up with a brand new computer design with select components and a custom-chassis mechanical design to meet the hash operating environmental conditions. These components included: 50C ambient temperature with high humidity, dust filtration, vibration isolation, and irregular AC power source. All system design functions went through vigorous system validation testing based on IEC standards to meet customer MTBF expectations.

Premio selected major computer components based on an embedded roadmap with a much longer product lifespan, and they shared all major components across platforms to minimize component variants across the board. Further, by establishing an effective PLM protocol with customer supply chain, operations, services, and engineering teams, Premio minimized the impacts of component EOL and gave the agency enough time to react without imposing stress on their daily operations.

By integrating an end-to-end PLM protocol with the agency's configuration management, Premio established an effective process to meet the agency's government contractual obligations on revision control and system configuration change control.

Results:

Dramatic drop in failure rate, increase in lifecycle & huge cost savings

With Premio's help, the angency's system in service failure rate dropped from double digits to less than 1%, way below industry standard, which saves them $1.5 million yearly in sustaining and servicing their customers.

Premio's solutions increased the product lifecycle from 1.5 years to more than 5 years, minimizing variations on system configurations, and lowering the agnecy's TCO, particularly in engineering qualification testing and service inventory management.

Since delivering on this project, Premio entered several operational agreements with the agency to manage the entire lifecycle of the products provided. All equipment provided has passed required regulatory compliance testing, and Premio also self-complies with RoHS 2, UL Safety, and ISO140001 environmental standards by default. These initiatives helped clients like this one to win more government contracts in recent years.

As the "primary supplier for computer equipment to this agency, Premio established a full scale business partnership at all levels including senior management teams, supply chain, engineering, quality, and services. Premio meets regularly with the agency to discuss issues and concerns, and track actions for continued improvement and continue success in the marketplace.