We make it ***possible***

Simplifying Success: **An Electromechanical Assembly Case Study**

Problem:
Increased competition and the rising price of parts.

Solution:
The selection of a sole-source provider of an AS9100 electromechanical assembly.

Results:
Optimized design and improved system performance of an assembly that met strict ITAR and DoD quality standards and regulatory mandates.

Improved Parts and Performance **with Reduced Costs and Headaches**

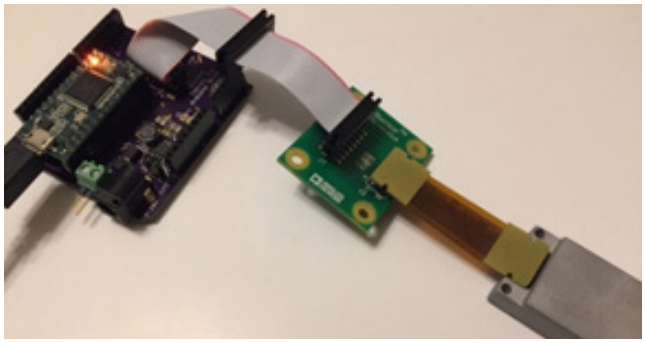
Facing increased competition in the marketplace and the rising costs of parts, a longtime Hutchinson customer and leading supplier of electromechanical systems to the military and aerospace markets was at a crossroads. To remain competitive, they recognized the need to improve efficiencies without compromising quality.

One particular internal assembly was scrutinized for being both complex and extremely expensive to produce, so the supplier began the search for a new partner—with some stipulations. To maintain both ITAR and DoD NOFORN compliance, the assembly needed to be produced by an American manufacturer capable of meeting AS9100 quality standards. Equally as important, and as challenging, the chosen company needed to be adept at supply chain management and system integration, which includes: manufacturing and/or procuring components from multiple suppliers, assembling a highly specialized vibration isolator to a sophisticated electronic device and testing performance of the final assembly under various operation conditions.

Hutchinson Provides an Optimal Solution

Hutchinson's technical background and experience from development of the isolation system for this product made us a logical choice for the integrated assembly of the unit. Our engineers worked with the customer to understand the assembly and testing process in greater detail through regular program management meetings.

With insight into the customer's specified electromechanical system performance requirements and environmental parameters, we devised assembly processes and test procedures as well as data collection and analysis methods to cost effectively meet the requirements for consistent performance. While the assembly itself was new, our team was able to draw from their extensive experience with sensitive electronics, and their familiarity and understanding of both the system's environmental and vibration exposure. As a result, this project was a natural extension of our team's capabilities.



Simplifying the Process

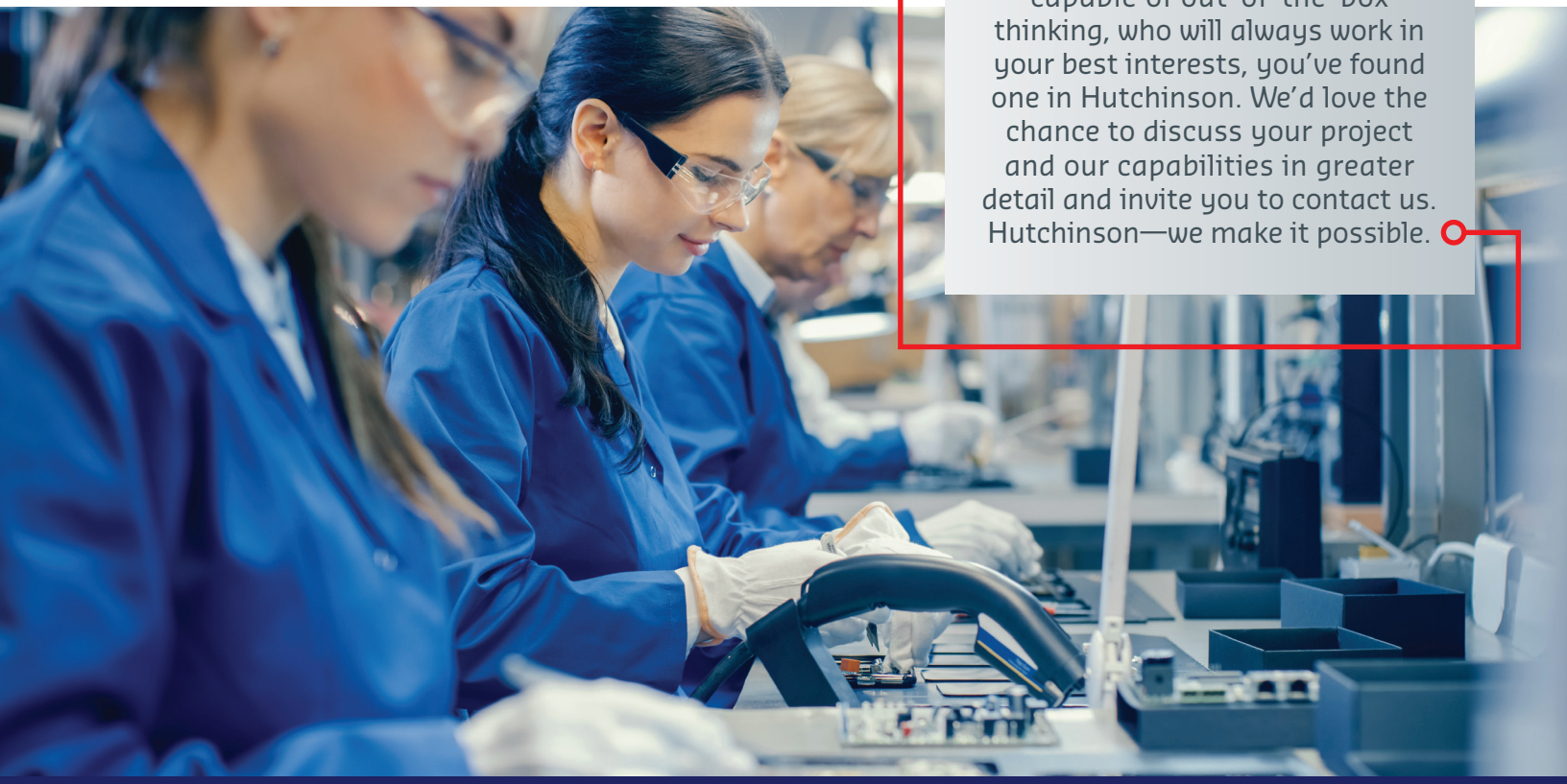
The complex assembly was originally produced internally by the customer and involved sourcing components from multiple external suppliers. By working with us, the client benefited from collaborating with a sole-source provider capable of designing, analyzing and manufacturing or sourcing the necessary components and fully managing the sub-tier suppliers, supply chain planning and logistics. This cut down on shipping costs and supply management, reducing manpower and the likelihood of errors or delays. Hutchinson's expertise in customized system testing enabled optimization of all aspects of electrical performance testing and thermal cycling into a single process for maximized cell throughput.

In the end, we produced an assembly that was fully compliant with the customer's project specifications and targeted costs. In addition, seven vendors were reduced to one, and the component count was reduced from fifteen to one.

Some of Hutchinson's electromechanical assembly capabilities include:

- ESD Handling Procedures IAW MIL-STD-1686, ANSI/ESD S20.20 and associated ANSI/ESD specifications—trained personnel capable of handling IPC Class 3 Electronics
- Electric assembly system with dedicated torque controller for consistency and process control
- Thermal Chamber designed to heat and cool assemblies between -70ºC and 180ºC. Peak rate of change exceeds 15ºC per minute. Temperature uniformity within the thermal chamber of ± 0.5ºC.
- Environmental Stress Screening processes IAW MIL-HDBK-344. Custom thermal test profiles based on customer specifications.
- Assembly and test cell features automated climate control, air purification and FOD prevention.
- In-house capability to design and build custom test software to meet customer test requirements.

If you are looking for a supplier capable of out-of-the-box thinking, who will always work in your best interests, you've found one in Hutchinson. We'd love the chance to discuss your project and our capabilities in greater detail and invite you to contact us. Hutchinson—we make it possible.



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