

Medical Case Study

Top 5 medical device company producing an advanced neurosurgical navigation system.



The Challenge

Each phase of the Company's production process relied upon a different supplier, causing supply chain management inefficiencies and frequent issues with on-time delivery and product quality. During this time, the company was also looking to modify the design of the product to comply with RoHS directed restrictions on certain hazardous substances in electronic equipment.

The Solution

As an FDA registered manufacturer with years of experience supporting Class II and Class III medical devices, IEC capitalized on its vertical manufacturing services to simplify the Company's supply chain to a single source by providing PCBA, interconnect solutions, precision metalworking, and advanced testing. IEC also redesigned the PCBAs to comply with RoHS requirements and improved the product's overall manufacturability, testability, and quality.

Decreased production cost by 10%

Partnering with IEC, the Company was able to simplify their supply chain complexities while improving speed, flexibility, and adherence to strict quality standards by leveraging IEC's vertically integrated service offering. This prevented unnecessary rework costs, reduced logistics expenses, and eliminated markups from intermediaries, allowing the Company to realize a greater than 10% reduction in landed product cost.

Reduced lead time by 50%

The Vendor-Managed Inventory (VMI) program at IEC offers dedicated on-site storage of electronic components for use when needed for production. By utilizing the VMI program, the Company has been able to reduce its product lead time by 50%.

Improved manufacturability

Utilizing advanced tools, such as Valor software, and industry leading Design for Excellence (DfX) principles, the engineers at IEC were not only able to ensure the design achieved RoHS compliance, they also reviewed the entire product design to optimize its layout. By incorporating design modifications suggested by IEC, including ensuring proper clearance for wave soldering, the Company saw improvements in the product's manufacturability and decreased production costs. IEC also tailored the design to include additional test access on the circuit card assembly, allowing the Company to achieve improved production yields and product quality levels.