

# APPLICATION STORY

## loxus Powers Up Innovation with Dimension 3D Printing

*"Parts that used to take us six weeks at the machine shop and cost \$500 to \$1500 per item, I now turn around in hours for less than \$20. I estimate our small shop has saved over \$100,000 in machining and prototyping since we purchased the printer three years ago."*

— Chad Hall,  
loxus COO

Throughout its history, efficiency and innovation have been core drivers of loxus Inc.'s business. loxus develops, manufactures and distributes ultracapacitor technologies for a wide range of energy storage markets. Its innovative products extend the charge time and reduce the use of batteries for electronics, hybrid vehicles, wind farms, and other green technologies. loxus' parent company, Custom Electronics, Inc. (CEI) has been manufacturing high voltage capacitors since 1964.

To maintain its position at the forefront of ultracapacitor technology, loxus and CEI employ multiple designers and invest significant time and money towards the research and development of new products.

CEI began to investigate 3D printing as a way to cut the cost and turnaround times for tools and fixtures they were producing through outside machine shops. They were also looking for a way to produce housings and molds for prototypes.

### Dimension Recharges Design and Manufacturing

After researching a variety of options, loxus purchased a Dimension 3D Printer from CADDimensions, Inc. CADDimensions is a Dimension value added reseller (VAR) providing sales, technical support, training, and more for the engineering, manufacturing, and educational markets in upstate N.Y., Northern Pa., Vt., and Western Mass.

"We specialize in delivering the right engineering tools to our customers, so they can realize a shorter time to market and a reduction in design, manufacturing, and overall operational costs," said Rod Benaware of CADDimensions.

"After looking at loxus' needs, we were confident that a Dimension 3D Printer would provide a faster, more cost-effective way for the company to produce tools, fixtures and prototypes," said Benaware. "Dimension and loxus were a perfect fit."

The impact of the Dimension 3D Printer on the two businesses has been dramatic. loxus estimates that their small shop has saved over \$100,000 in machining and prototyping since we purchased the printer three years ago.

"Parts that used to take us six weeks at the machine shop and cost \$500 to \$1500 per item, I now turn around in hours for less than \$20," said loxus COO Chad Hall (formerly Engineering Manager of CEI). "Recently, we built a high voltage capacitor housing in less than two days with the Dimension 3D Printer at a cost of just \$250. That same piece would have taken fourteen weeks to machine at a cost of \$12,500."

CEI has used the Dimension 3D Printer extensively to create nesting jigs and fixtures for assembly and soldering processes. "We thread on holding mechanisms and glue sheets of metal where needed to prevent damage during soldering," said Hall.

In addition, Ioxus has used the Dimension 3D Printer for marketing to potential clients. "We've printed models of our revolutionary design ideas in the Dimension 3D Printer and used them to attract customers and investors," said Hall. "It's an incredibly powerful way to communicate the possibilities in an industry that requires a high degree of specialization."

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