

BOXX TECHNOLOGIES, INC.

ADVANCING SPECIALIZED COMPUTER WORKSTATION
DEVELOPMENT WITH SOLIDWORKS PREMIUM



BOXX Technologies relies on SOLIDWORKS Premium design software to more efficiently and cost-effectively develop its top-performing workstations and rendering systems.

BOXX

Challenge:

Accelerate the development of powerful computer workstations and rendering systems to meet the specialized needs of media, engineering, medical, and business customers.

Solution:

Implement SOLIDWORKS Premium design software.

Benefits:

- Cut development time by more than half
- Reduced sheet metal fabrication time by 50 percent
- Eliminated iterative prototyping cycles
- Supported year-over-year business growth of 40 percent

BOXX Technologies, Inc. manufactures specialized workstations and rendering systems for visual effects (VFX), film, television, game development, architecture, engineering, product design, simulation, higher education, government, defense, science, medical, and general business industries. BOXX workstations continually beat the competition in speed and reliability, and the company's overclocked APEXX series workstations are the fastest single-socket workstations on the market, providing the ideal solution for frequency-bound CAD applications. For multi-threaded tasks like rendering and simulation, BOXX has a full line of dual Intel® Xeon® workstations and rendering solutions.

With its industry-leading expertise in hardware requirements for modern render farms and simulation clusters—backed up with comprehensive lab benchmarking of various software applications to ensure optimum performance—BOXX focuses on developing systems that push the limits of what computer workstations can do. According to Founder and Vice President of Engineering and Operations Tim Lawrence, BOXX needed a 3D design platform to advance development of the custom chassis and enclosure designs required for its systems.

"We started out using AutoCAD® 2D design tools," Lawrence recalls. "While 2D initially allowed us to get the job done, it was difficult, slow, and costly to develop systems in 2D. We foresaw challenges as we continued to develop and advance our technology—including sheet metal fabrication; design branding; advanced cooling systems development; unique shipping requirements; and electromagnetic shielding, safety, and international certifications—that we could better tackle in 3D. As a systems manufacturer, we need to continually develop custom chassis and enclosures that not only embody our brand but also satisfy a range of requirements that are unique to high-performance systems."

BOXX consulted with manufacturing partners before standardizing on SOLIDWORKS® Premium design software. The systems manufacturer implemented SOLIDWORKS software in 2004 because it's easier to learn and use, provides robust sheet metal and simulation capabilities, and supports both industrial design and mechanical engineering.

"We asked our sheet metal fabricators about the 3D CAD systems used by their customers," Lawrence recalls. "While they mentioned Pro/ENGINEER® and SOLIDWORKS software as the systems they saw most often, they also indicated that SOLIDWORKS software was easier to learn and use, and was trending upward in terms of popularity. I sat down with SOLIDWORKS software, was able to design right away, and decided to utilize SOLIDWORKS software for chassis and enclosure development."

DESIGNING MORE SOPHISTICATED SYSTEMS IN HALF THE TIME

Since implementing SOLIDWORKS Premium software, BOXX has realized dramatic reductions in the length of its development cycles, while simultaneously increasing system complexity, improving quality, and boosting performance. "SOLIDWORKS software has enabled us to cut our development process by more than half," Lawrence stresses.

"We're saving on both time and resources using SOLIDWORKS software," Lawrence continues. "It used to take two to three people about 15 weeks to develop a system in 2D. With SOLIDWORKS software, I can complete a system by myself in four or five weeks. In addition to these efficiency gains, we ultimately end up with a better design."

ACCELERATING SHEET METAL FABRICATION, REDUCING PROTOTYPES

BOXX has seen faster production cycles and a reduction in prototyping requirements since moving to SOLIDWORKS software. Using the software's sheet metal design tools, BOXX can more quickly deliver production information—including bend radii and tolerances—which accelerates sheet metal fabrication. With SOLIDWORKS Premium software's collision detection and integrated simulation capabilities, the systems manufacturer has eliminated the iterative prototyping cycles that were a necessity in 2D.



"SOLIDWORKS software lets us be more agile, flexible, and innovative. From an engineering standpoint, we couldn't do what we do today without SOLIDWORKS software."

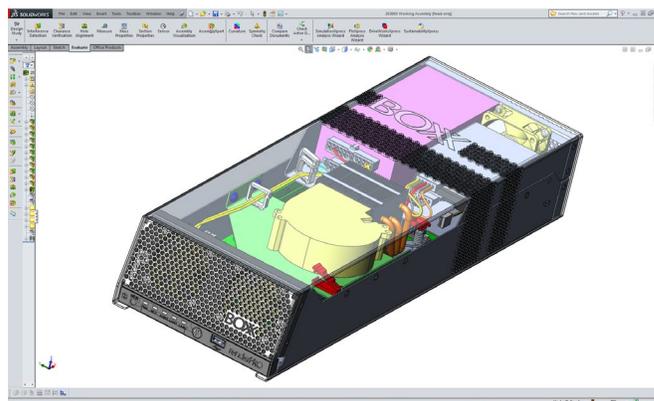
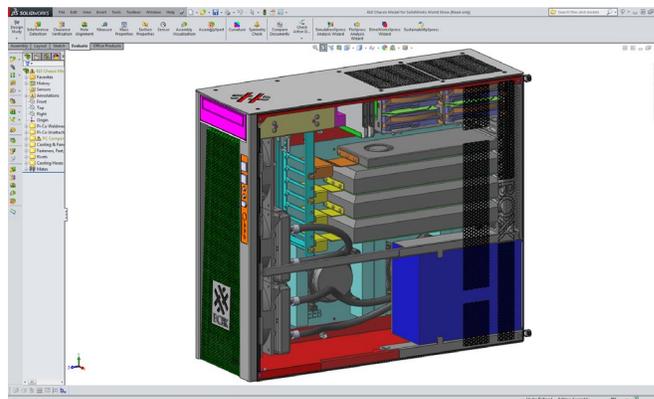
— Tim Lawrence, Founder and Vice President of Engineering and Operations

“Our sheet metal fabrication time has decreased by 50 percent, and we have fewer production issues because SOLIDWORKS software helps us to be more accurate,” Lawrence notes. “With increased accuracy, we’ve eliminated the iterative prototyping cycles that were a fact of life in 2D and can go straight to production. With SOLIDWORKS software, we can identify and resolve potential issues during design instead of relying on physical prototyping.”

IMPROVING QUALITY AND PERFORMANCE DRIVES GROWTH

Using SOLIDWORKS Premium software, BOXX has continually improved the quality and performance of its systems, which has allowed the company to enjoy year-over-year business growth of 40 percent. “To provide the functionality and performance that our customers demand, we design systems that utilize the fastest and most powerful components, which also run at higher temperatures,” Lawrence explains.

“With SOLIDWORKS software, we’ve introduced design features that provide the reliable performance that our customers need, such as liquid cooling systems, filtered air, multi-GPU capability, and optimization of the pitch of fins on heat sinks,” Lawrence adds. “SOLIDWORKS software lets us be more agile, flexible, and innovative. From an engineering standpoint, we couldn’t do what we do today without SOLIDWORKS software.”



Using SOLIDWORKS Premium sheet metal design tools, BOXX can more quickly deliver production information—including bend radii and tolerances—which accelerates sheet metal fabrication while improving quality.

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