

AKRIBIS SYSTEMS PTE. LTD.

GROWING A PRECISION MOTION-CONTROL TECHNOLOGY COMPANY WITH SOLIDWORKS



Akribis Systems relied on SOLIDWORKS design and simulation tools to develop its direct-drive precision electronics positioning systems and grow dramatically since its founding in 2004, expanding from a single office in Singapore to establish additional offices in China, Korea, Japan, Thailand, and the United States



Akribis Systems
where precision matters

Challenge:

Launch and grow a precision motion-control technology company to support factory automation, production, and assembly in a range of industries.

Solution:

Implement SOLIDWORKS Standard design and SOLIDWORKS Simulation analysis software solutions.

Benefits:

- Reduced design cycles by 30 to 50 percent
- Shortened time-to-market by 15 to 20 percent
- Cut development costs by 15 to 20 percent
- Supported expansion into new markets and countries

Akribis Systems Pte. Ltd. is a leading manufacturer of direct-drive precision positioning systems for industrial manufacturing, inspection, and testing. The company specializes in developing systems to support electronics manufacturing—serving customers in the semiconductor, mobile phone, flat panel, and data storage industries—but also designs and manufactures linear servo motors, rotary motors, air bearing stages, xyz stages, voice coil motors, and other types of motion control products for photonics, biomedical, and machine tool applications.

Since its founding in 2004 in Singapore, Akribis Systems has grown both in terms of the number of customers that it serves and the types of complex systems that it produces. In addition to its Singapore headquarters, the company now has offices in China, Korea, Japan, Thailand, and the United States.

Co-founder Yong Peng Leow, who now serves as managing director and engineering director, says that choosing the right 3D development platform was important for the company's successful launch and business growth. "Before founding Akribis Systems, I had personally used several different 3D CAD systems, including Unigraphics®, Solid Edge®, and Pro/ENGINEER®," Leow recalls. "When we founded the company, we performed a thorough evaluation of available 3D design solutions—rather than select a system with which I had experience—because it was important to choose a design platform that would help us grow.

"We decided to standardize on SOLIDWORKS® design software, even though I had not previously used it," Leow recounts. "We chose SOLIDWORKS because it is easy to use, provides the best price/performance ratio, and gives us the integrated capabilities that we need to be successful."

Akribis Systems standardized on SOLIDWORKS solutions, implementing SOLIDWORKS Standard design and SOLIDWORKS Simulation analysis software. "Of the reasons why we chose SOLIDWORKS, ease of use was the most important because we are able to train people very easily to support growth," Leow notes. "Our customers want our systems to be developed better, faster, and cheaper, and the SOLIDWORKS platform has allowed us to consistently satisfy customer expectations."

FAST, ACCURATE DEVELOPMENT

Using SOLIDWORKS solutions, Akribis Systems has delivered its complex systems faster, at lower cost, and at higher quality than its competition. The company has reduced design cycles by 30 to 50 percent, cut development costs by 15 to 20 percent, and shortened product time-to-market by 15 to 20 percent. "With SOLIDWORKS, we are faster and more accurate, providing high-quality systems on time and on budget," Leow stresses.

"Our customers typically send us their requirements, and we respond by sending them a model and specifications for our proposed system," Leow says. "The ability to bring my design to the customer's factory and show them the proposed solution by viewing SOLIDWORKS eDrawings® files on my iPad enables me to demonstrate the precision of our technology without showing too much detail."



"Our systems involve high-speed motion, so we need to verify the vibration characteristics of our designs and optimize the stiffness-to-mass ratio as much as possible. In today's fast-paced world, we simply don't have the time to do something a second time. With SOLIDWORKS Simulation, we have an integrated tool that helps us get it right the first time and improve the quality of our products."

— Yong Peng Leow,
Managing Director, Engineering Director, and Co-Founder

VALIDATING SYSTEM DESIGN

Akribis Systems maintains high-quality standards by leveraging SOLIDWORKS Simulation finite element analysis (FEA) tools to validate system designs while avoiding costly, time-consuming rounds of prototyping. The company conducts kinematics, linear static stress and strain, and frequency analyses of parts and assemblies to confirm that they will perform as intended in the customer's specific application.

"The FEA studies that we conduct with SOLIDWORKS Simulation software are vitally important for ensuring top system performance without spending time and money on prototypes," Leow points out.

Focus on Akribis Systems Pte. Ltd.
VAR: SEACAD Technologies, Singapore

Headquarters: 5012 Techplace II Ang Mo Kio Ave 5
#01-05
Singapore 569876
Phone: + 65 6484 3357

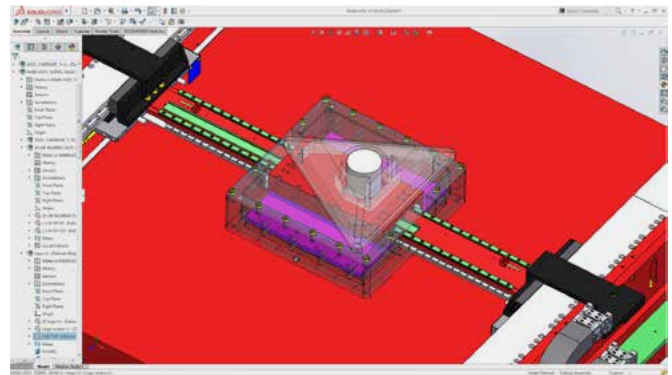
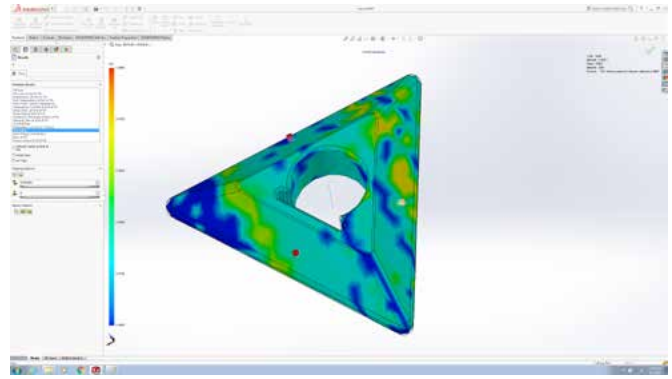
For more information
www.akribis-sys.com

"Our systems involve high-speed motion, so we need to verify the vibration characteristics of our designs and optimize the stiffness-to-mass ratio as much as possible," Leow continues. "In today's fast-paced world, we simply don't have the time to do something a second time. With SOLIDWORKS Simulation, we have an integrated tool that helps us get it right the first time and improve the quality of our products."

SUPPORTING BUSINESS EXPANSION AND GROWTH

Since implementing SOLIDWORKS solutions, Akribis Systems has grown dramatically, increasing its number of employees from 10 to 250, expanding from one office in Singapore to six offices in six countries, and building an impressive customer list. "Although we are very much focused on precision motion-control technology for electronics manufacturing, we are diversifying and expanding into new markets, such as biomedical testing applications in the United States," Leow says.

"SOLIDWORKS solutions have allowed us to support and sustain this growth path," Leow adds. "For example, with SOLIDWORKS Subscription Services, we are assured of keeping up-to-date with the latest version of SOLIDWORKS, which enables us to remain compatible with existing customers and work with new customers in a streamlined, effective way."



Using SOLIDWORKS design and simulation capabilities, Akribis Systems has shortened design cycles for its positioning systems, reduced development costs, and accelerated time-to-market.

Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 210,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.

