Press Releases

XELA Robotics Announces Integration Milestone and Reveals its 2026 Technology Roadmap

Company to exhibit and demonstrate its technology at 2026 Consumer Electronics Show in Las Vegas

TOKYO, Dec. 3, 2025 /PRNewswire/ -- XELA Robotics (www.xelarobotics.com), a specialist in advanced 3D tactile sensor technology, has successfully integrated its uSkin® sensors into a Tesollo DG-5F five-fingered anthropomorphic robot hand – a popular model capable of human-level gripping and manipulation.

Commercial orders will be accepted beginning in the late first quarter of 2026.

In addition, XELA Robotics' 2026 technology roadmap includes making its sensors smaller, faster and smarter. An example of this will be the reduction in size of its sensing points from about 4 mm x 4 mm to 2.5 mm x 2.5 mm allowing the addition of more sensing points than previously possible. The reduced size sensor points will be available for order in the second quarter of 2026.

"Currently, many activities cannot be fully automated because robots cannot handle objects as carefully and efficiently as humans do," said Alexander Schmitz, CEO, XELA Robotics. "Our uSkin tactile technology delivers high performance sensing down to 0.1 gram-force which provides robots with a human sense of touch so they can feel contact, pressure and motion to perform complex tasks with unprecedented precision."

Tesollo Integration Expands Company's Hardware Agnostic Portfolio

XELA Robotics was tasked with developing an integration for the Tesollo DG-5F robotic hand at the request of a client.

A dedicated team took on the challenge and delivered a solution that enhances the capabilities of the existing model. The Tesollo DG-5F — a human-sized robotic hand with independent joint control — already offered intuitive tool use and precise object manipulation for research, industrial and service robots. Now, through the integration of XELA Robotics' tactile sensors, the hand has gained a human-like sense of touch without changing its original human-size form factor.

The new sensor system covers the fingertips, phalanges and palm, and includes a nail element, allowing the hand to interact with objects even more precisely. Each fingertip features 12 sensing points within a compact form factor (21.15 mm height × 25.72 mm width × 22.02 mm length). The integration was completed and shipped in the fourth quarter of 2025.

It joins a range of integrations for other robotic companies and their hands and grippers including Wonik Robotics, Sake Robotics, Weiss Robotics and Robotiq – allowing customers to utilize their pre-existing, preferred hardware.

'Human Touch' Sensors Enable Execution of Complex Tasks

The upcoming 2.5 mm x 2.5 mm sensing points will provide a higher spatial density compared to the company's previous sensing points. The family of uSkin sensors allows robots to understand how tightly they are gripping an object, as well as how it moves within their grasp. Built from a flexible elastomer, they conform to different object shapes, grippers and robot hands and can be customized to meet specific application needs.

The company's proprietary high-density three-axis tactile sensors address the fast-growing market for humanoid and industrial robot hands and grippers in a broad range of applications including manufacturing, logistics, warehousing and agriculture. XELA Robotics' hardware and software solution already enables an advanced sense of touch to robots used in research labs and by industrial and commercial clients.

Durable and highly cost-effective, the new uSkin sensors are designed to integrate seamlessly into parallel grippers, multi-finger adaptive grippers, custom end-effectors or robotic hands including those that customers may already have in place. This greatly reduces the engineering requirements, risk and cost normally associated with adding advanced tactile sensing to existing systems.

XELA Robotics will display and demonstrate its uSkin sensor technology at the upcoming 2026 Consumer Electronics Show (CES) in Las Vegas (January 6 – 9, 2026) in the North Hall of the Las Vegas Convention Center, booth 8500. To schedule a meeting and demonstration, or for more information, contact sales@xelarobotics.com.

About XELA Robotics

XELA Robotics originated as a spin-out from Waseda University, one of the top universities in Tokyo. With a team that boasts over 70 years of combined experience in the field of tactile sensing, the company is at the forefront of developing advanced tactile AI technologies.

**uSkin is a registered trademark of XELA Robotics. All other trade names are the property of their respective owners.*

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