

XELA Robotics Unlocks Enhanced Automation for Humanoid and Industrial Robots

First-time CES exhibitor to demonstrate its breakthrough in physical AI providing robots with human sense of touch

LAS VEGAS and TOKYO, Jan. 5, 2026 /PRNewswire/ -- XELA Robotics (www.xelarobotics.com), a specialist in advanced 3D tactile sensors, has succeeded in providing a human sense of touch for humanoid and industrial robots.

The first-time CES exhibitor (LVCC North Hall, booth 8500) is displaying a working demonstration of its uSkin® sensor technology integrated into robot hands and grippers.

The hardware and software solution enabling physical AI, already in use in universities and commercial settings, unlocks a new level of automation. It helps solve the challenge of robotic hands that simply cannot handle objects as carefully and efficiently as humans. XELA Robotics' sensors are durable, compact, easy to integrate and highly cost-effective. They are offered on both a standalone basis as well as integrated into robot hands and grippers.

uSkin Sensors Offered for Popular Robot Hands and Grippers

XELA Robotics offers integrations for several robotic companies' offerings including Wonik Robotics, Sake Robotics, Weiss Robotics and Robotiq – allowing its customers to utilize their pre-existing, preferred hardware.

In December 2025, the company announced it had 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 – with commercial orders being accepted beginning in the late first quarter of 2026.

"We have taken an agnostic approach towards the commercialization of our technology," said Alexander Schmitz, CEO, XELA Robotics. "Our focus has been to develop the most human-like sense of touch and make it available to all companies seeking to enhance their real-world automation."

uSkin 'Human Touch' Sensors Enable Execution of Complex Tasks

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 3D tactile sensors detect object shape, contact forces and soon slippage in real time. Without 3D tactile data, these "simple" tasks for humans are extremely difficult for robots. And, unlike most robotic hands on the market, which only have sensors in the fingertips, XELA Robotics can integrate its sensors in a significantly larger surface area, fingertips, phalanges and the palm, making it much closer to the real thing.

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.

Durable and highly cost-effective, the 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.


For more information on XELA Robotics and its uSkin tactile sensor technology, contact sales@xelarobotics.com.

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.

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