



XELA Robotics offers industry-disrupting technology with our tactile sensors, creating new possibilities in assembly, logistics, agriculture, and many other fields.

We believe that there is a missing piece in the design of current robots. Most companies focus on visual data and smart AI, which are very important to locate an object. However, visual data is not enough to grasp, hold, and manipulate an object. Tactile data is required to solve this problem.

Only the sense of touch can tell you if you are: grasping the object with the right amount of force, if the object is slipping out of your hand, and so forth.

WE ARE A

Hardware and Software Company

INTO

Tactile Sensing Technology

ESTABLISHED TO

Provide the Human Sense of Touch to Robots



Hardware Development
Tactile Sensors



Integration Service
Sensor Integration



Software Development
UAI Software

HARWARE DEVELOPMENT



Our company developed uSkin, a high-density 3-axis tactile sensor in a thin, soft, durable package, with minimal wiring. uSkin can be easily integrated into both new and existing robots.

This provides robots with a human-like sense of touch, which gives them the ability to grasp and manipulate objects with precision.

For more detailed information about our tactile sensors, please visit our website at: <https://xelarobotics.com/en/uskin-sensor>



INTEGRATION SERVICE

The XELA uSkin can be easily integrated into both new and existing robots. These are some of the robot hands and grippers that we have recently equipped with uSkin Sensors.

For more detailed information, please visit our website at: <https://xelarobotics.com/en/integrations>

Recent Integrations



WSG 50 & EGI
Integration

- 24 taxels per module
- 2 sensor modules
- 48 taxels in total



F2-140 & 85
Integration

- 24 taxels per module
- 2 sensor modules
- 48 taxels in total



Allegro Hand
Integration

- Each finger includes 78 taxels
- The palm includes 72 sensors
- 368 tri-axial tactile sensors in total

SOFTWARE DEVELOPMENT

XELA Robotics is currently rolling out its features for the upcoming uSkin Ai (UAI) Software and the UAI App.

Our software solution and App will host many features to improve the overall uSkin experience and benefit our users.

Below an overview of all the active and upcoming UAI Software features. For a more detailed description, please review the Product Catalog.

Basic Functions

Basic Tactile Functions

- Data Recording
- Tactile Data Visualisation
- Point of Contact

Postprocessing

Enhanced Data Collection

- Force Calibration
- Magnetic Interference Compensation
- Temperature Drift Compensation

Object Grasping

For Robotic Integration

- Set Force / Pressure
- Slip Detection
- Deformation Detection
- Grasp Success Recognition
- Suggestion for Grasp Correction
- Self Learning

Object Information

Detect Internal Properties

- Detect Weight
- Detect Texture
- Detect Stiffness
- Detect Adhesion
- Detect Shape
- Object Orientation
- Object Localisation
- Recognise Objects
- Detect Object Geometry

About Us



XELA Robotics Co., Ltd.

5th floor, Room 501, Shinjuku Lambdax Building
2-4-12 Okubo, Shinjuku-ku, Tokyo
169-0072 Japan

info@xelarobotics.com
www.xelarobotics.com
+81-3-6273-9827

