



Pressure Profile Sensing - RoboTouch

Description

RoboTouch sensing solutions bring tactile sensing technology to the world of industrial and consumer robotics. The technology was born out of the Robotics Lab at Harvard University with the ambition to give robots the sense of touch. After years of refinement and proven success with BarrettHand, Twendy-One and PR2, RoboTouch Solutions are ready for integration into most robotic gripper applications.

RoboTouch technology gives a robot the ability to manipulate delicate objects without breaking them. They will also be able to operate at optimised low-powers for energy efficiency by using minimum grasp force. The sensor simplicity allows flexibility in customising designs to fit nearly any robot gripper design.

RoboTouch sensing solutions include multiple sensing pads, each with 12-24 sensing elements with SPI or I2C digital interfaces. These can be placed on the location of your choosing including robot fingertips, grippers and palm surfaces. Each individual pad is constructed using capacitive based pressure sensing technology, ensuring the high sensitivity needed for tactile applications. The key features of these sensors are shown below.



Twendy-One



BarrettHand

Key Features

- Pressure range = 0 - 140 kPa (20 psi)
- Sensitivity = 0.5%, Repeatability < 2%
- Variable sensor layout for optimum coverage, thickness < 0.5 mm
- Digital output for full integration
- USB/Wireless interface via D600 module
- Design sensors for most robot grippers