

# PapillArray Tactile Sensor Development Kit (Beta)

## Giving robots a human **sense of touch**

The only commercial sensor that can measure ALL the tactile parameters required for object manipulation:

- Localised 3D deflection, 3D force and 3D vibration
- Global 3D force and 3D torque
- Incipient slip
- Friction

## Enabling **robotic dexterity**

Calculate the optimal grip forces for autonomous robotic manipulation in real-time!

Handle any object without pre-programming any grip parameters!



Sensor



Communications Hub



Visualisation Software

### Sensing: Single element

Local Displacement	X, Y	Z
Range (mm)	±1	+1.5
Resolution (mm)	< ±0.03	< ±0.01
Local Force	X, Y	Z
Range (N)	±1	5
Resolution (N)	< ±0.02	< ±0.02

### Sensing: Global (3x3 array)

Global Force	X, Y	Z
Range (N)	±9	40
Global Torque	X, Y	Z
Range (Nm)	±0.125	±0.063

### Dimensions (mm)

W x L x H	31.5 x 38.5 x 26.2
Sensing element spacing	8.5 (centre-to-centre)
Sensing element diameter	6

### Dimensions

(W x L x H mm) 49 × 38 × 24.5

### Mounting

4x M3 threaded screw holes

### Data Interface

Interface	USB
Sampling Rate (Hz)	1000

### C++ Library

### Operating System

Linux, Windows

### Purpose

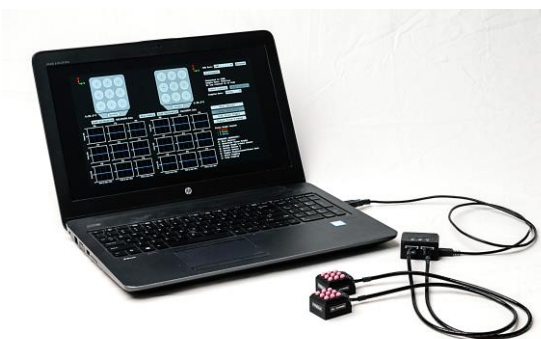
- Integration into user application software
- Log data to CSV file

### Operating System

Windows

### Purpose

- Display 3D displacement and 3D force of each sensing element
- Log data to CSV file



**contactile**

info@contactile.com | www.contractile.com