

PapillArray Tactile Sensor Development Kit (v2.0)

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!

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2x Sensor



1x Controller



Visualisation Software

Sensing: Single element			
Local Displacement	X, Y	Z	
Range (mm)	±1	+2.5	
Resolution (mm)	< ±0.01	< ±0.01	
Local Force	X, Y	Z	
Range (N)	±4	15	
Resolution (N)	< ±0.05	< ±0.05	
Sensing: Global (3x3 array)			
Global Force	X, Y	Z	
Range (N)	±9	60	
Global Torque	X, Y	Z	
Range (Nm)	±0.125	±0.050	
Dimensions (mm)			
W x L x H	24.0 x 30.6 x 12.8		
Sensing element spacing	7.0 (centre-to-centre)		
Sensing element diameter	6.0		
Mounting			
4x M3 threaded screw holes			

Dimensions	
(W x L x H mm)	46.0 × 36.0 × 16.0
Mounting	
4x M3 threaded screw holes	
Power and Data	
Power and Data Interface	USB
Current Draw (mA)	< 200
Sampling Rate (Hz)	1000



Operating System	
Windows	
Purpose	
<ul style="list-style-type: none"> • Display 3D force and displacement of each sensing element • Log data to CSV file 	
C++ Library (optional)	
Operating System	
Linux, Windows	
Purpose	
<ul style="list-style-type: none"> • Integration into user application software • Log data to CSV file 	
ROS Node (optional)	
Operating System	
Linux	
Purpose	
<ul style="list-style-type: none"> • Integration into ROS systems 	