ARRAY SENSOR

Multi-Point Pressure Mapping Sensor

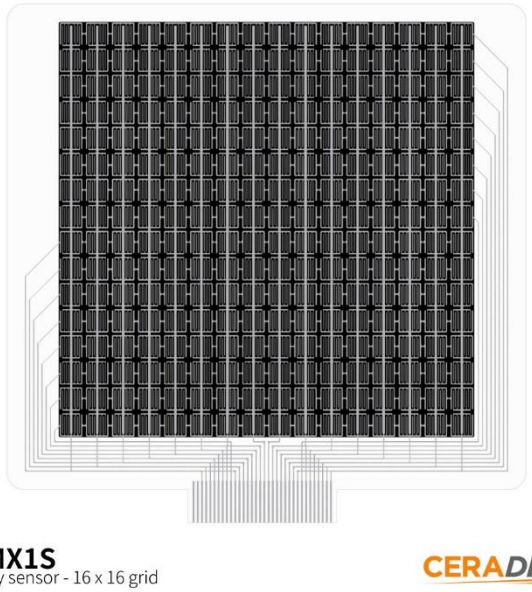
SHUNT Mode

PMX1S

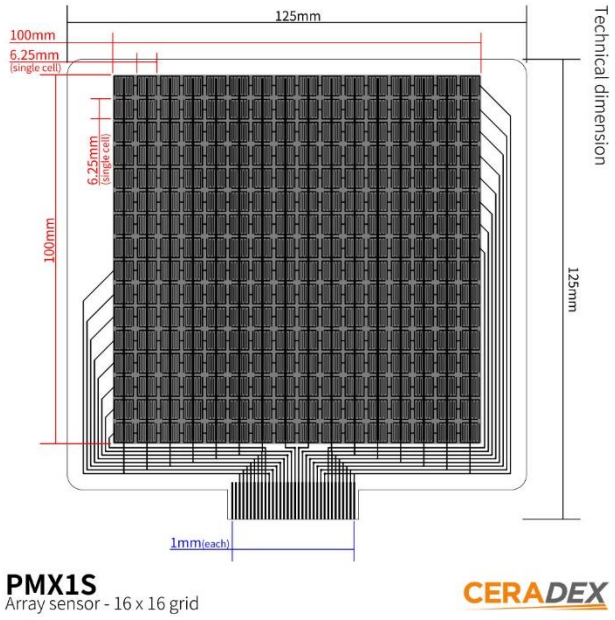
Datasheet

Features

Multi-point grid sensing
Wide dynamic pressure sensing
Flexible and lightweight
Ultra-thin
Instant responding sensitivity
Low actuation force
Low power consumption
Robust
Easy to integrate



Technical specifications



Sensor	PMX1S
Length	125mm
Width	125mm
Active area	100mm x 100mm
Sensing cell (count)	256 (16 rows x 16 columns)
Sensing cell (single)	6.25mm x 6.25mm
Pin spacing	1mm
Nominal thickness	0.56mm
Substrate	PET
Sensor style	Close
Connector	FPC-34P 1.0mm

Note: Ceradex offer customize sensor solution for application-specific integration. Including the sensor's dimension, single-zone or multi-zone sensing area, connector options, waterproofs, humidity tolerance, and heat tolerance. Contact us for more information.

Characteristics

Sensor type		Shunt mode
Force sensing range		200 g – 10 kg
Actuation force		≤ 100 g/cm^2
Force resolution		Continuous (analog)
Force repeatability	Single part	± 2%
Non-actuated resistance		> 10M Ω (Ohm)
Response time		< 40 ms
Operation temperature		-20°C - +60°C

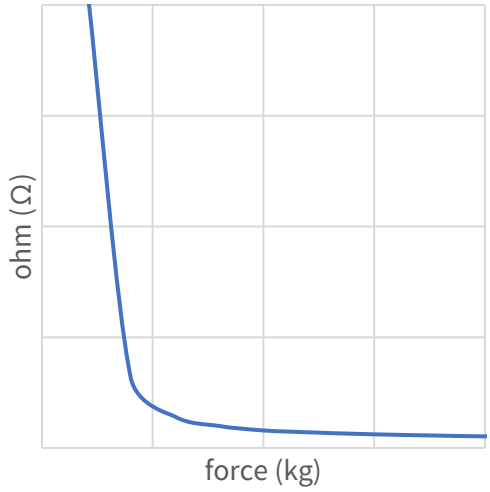
Durability

Tap durability	1kg/1Hz	> 10M actuation
Standing load durability	2.5kg/24hr	< 5%
Operating temperature performance		
Cold	-40°C/1hr	< 5%
Hot	+60°C/1hr	<15%
Storage temperature performance		
Cold	-40°C/1hr	< 10%
Hot	+60°C/1hr	<15%

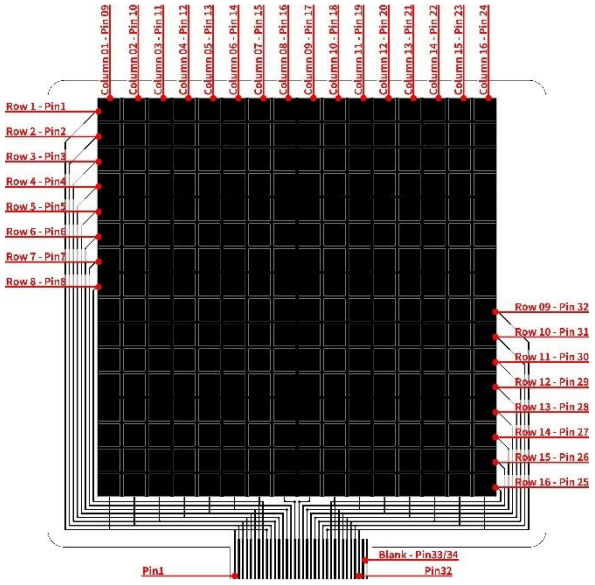
Safety

Maximum driving power	< 240mW
Electromagnetic interference (EMI)	No
Electrostatic discharge (ESD)	No

Response curve



Position / pin layout



Note: Force sensing range, response curve, and actuation force can be modified in Ceradex's customized sensor solution.

Applications

Interactive applications

Integrated within interactive devices that connected with Apps.

Occupancy detection

Seat/bed occupancy indicator for safety and posture monitoring.

Pressure mapping system

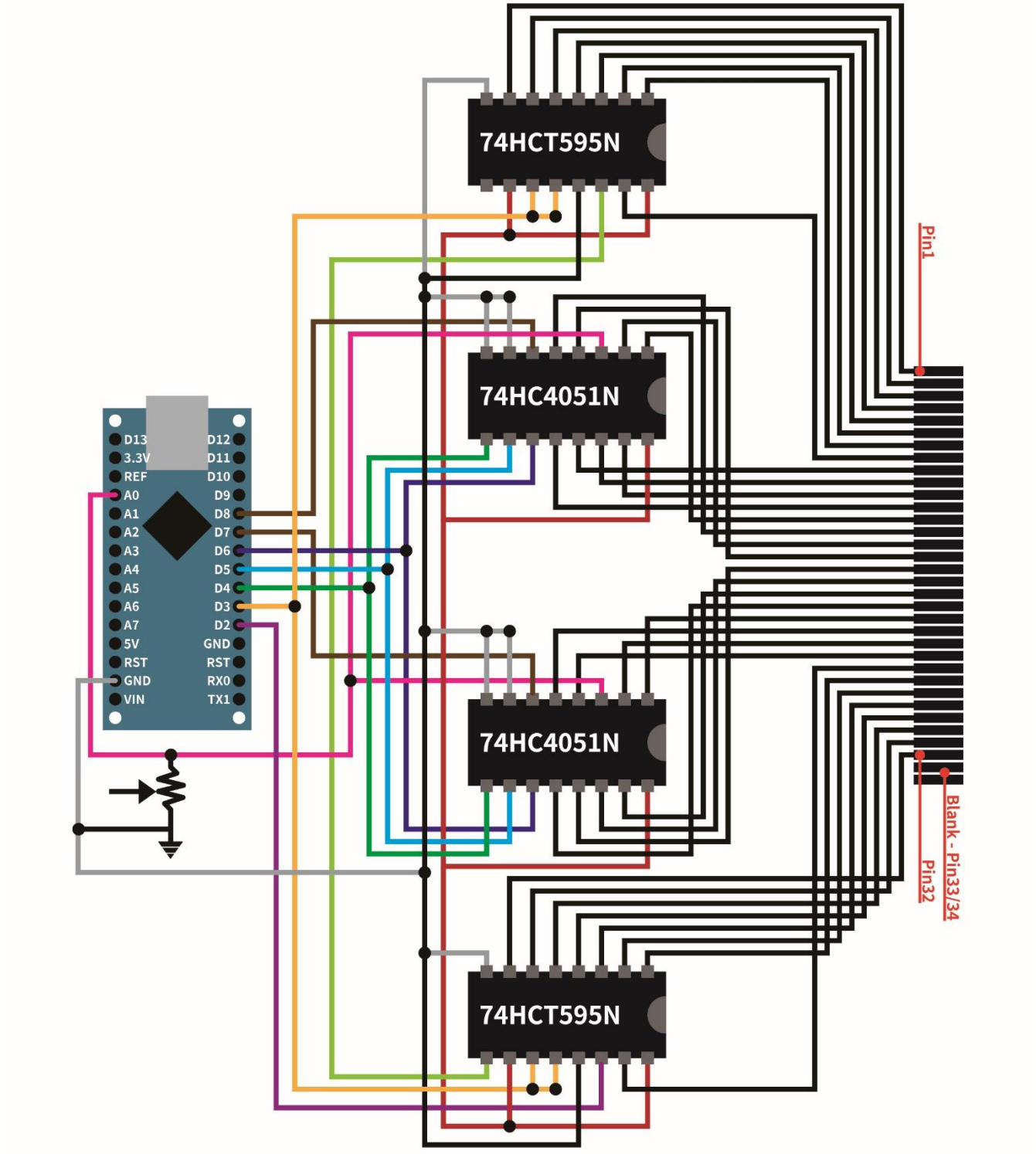
Integrated within mechanical assets for calibration and monitoring.

Electronic surface for flatness analysis and pressure distribution analysis

Biomedical pressure analysis

Can be used in wearable devices such as foot sensing and posture analysis.

Integration layout



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