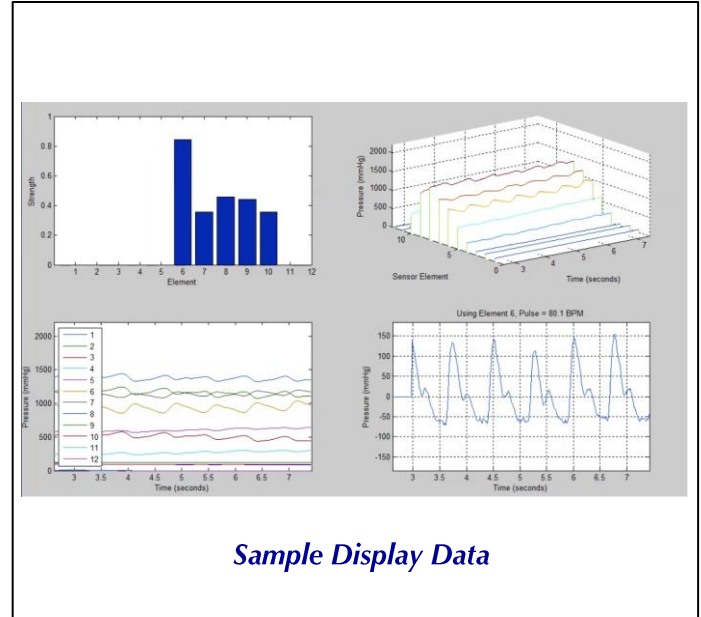




Pulse Sensor Development Kit with Multiple Sensor Designs



Sample Display Data

PRODUCT OVERVIEW

PPS's **Pulse Sensor Development Kit** provides a simple, non-invasive means for capturing pulse pressure waveforms while eliminating the need for cumbersome equipment. This kit is intended for developers who wish to incorporate PPS's pulse sensors and waveform software into their product.

Designers of smart apparel & accessories, fitness & health monitoring equipment, and ambulatory medical monitoring devices need a way to capture not just the pulse rate, but also high-fidelity waveform data for the extraction of more sophisticated cardiovascular data. The sensors and software in the Pulse Sensor Development Kit capture high-resolution pulse waveforms using simple, non-invasive tactile sensors that can easily integrate into devices or apparel. Plus, the multitude of sensing points eliminates the need for precise positioning, allowing an algorithm to identify the element with the strongest pulse waveform signal.

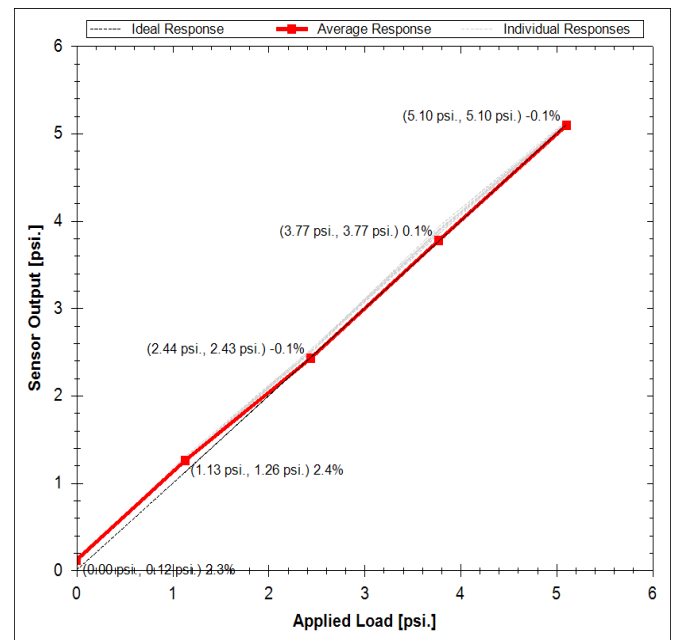
Licensing arrangements for the embedded sensors and software is negotiated independent of the purchase of this kit.

KEY SYSTEM FEATURES AND BENEFITS

- **Non-Invasive system** for capturing high-fidelity pulse waveform and blood pressure without precisely positioning the sensor.
- **Highly-sensitive with acquisition rates greater than 100 Hz**, fast enough for pulse capture.
- **First Multi-Element sensor used for health monitoring.** No need for precise positioning.
- **Advanced algorithm identifies and extracts the strongest pulse waveform** from available sensing elements.
- **SPI or I2C serial digital sensor output** ideal for OEM integration.
- **Custom API** allows customers to develop their own algorithms for their specific requirements.
- **Sensitive enough to capture pulse waveform data**, which allows calculation of blood pressure and advanced cardiovascular metrics.
- **Chameleon Visualization Software provides** intuitive, easy to use, high-quality visualization and easy access to data for analysis and export to other applications.

SENSOR MODELS				
Model Number	4209	4350	5601	5612
Total Sensor Area	17mm x 102mm	17mm x 104mm	12mm x 64mm	12mm x 58mm
Active Sensing Area	7.5mm x 10mm	12mm x 8mm	20mm x 4mm	14mm x 4mm
Element Count	12 (3x4)	24 (6x4)	12 (12x1)	12 (12x1)
Spatial Resolution	2mm x 2mm	2.5mm x 2.5mm	1.7mm x 4mm	1.17mm x 4mm

SENSOR CHARACTERISTICS AND PERFORMANCE ¹	
Pressure Range	5 PSI
Pressure Sensitivity	0.2%
Signal to Noise Ratio (SNR)	690:1
Repeatability Error	0.4%
Linearity	99.8%
Accuracy Error ²	<=3.0%
Contact Surface Material	Cloth & Polyimide
Sensor Thickness	0.02 in (0.5 mm)
Cable Length	59 in (1.5m)
Operating Temperature	-20°C to 100°C



ELECTRONICS SPECIFICATIONS	
Sample Rate	100Hz
Computer Interface	Bluetooth
ADC Resolution	16 bit
Input Voltage	5V
Input Power	2.5W
Enclosure Size	3x1.5x0.5 in. (75x40x12.8 cm)
Weight	0.12 lbs. (55g)

SYSTEM COMPONENTS

- 2 Un-Mounted Sensors of chosen design
- Rechargeable D710 electronics interface module with Bluetooth connectivity
- Chameleon Visualization and Data Acquisition Software
- API Library & Documentation
- Remote Installation and Training

¹ Performance numbers are for typical system response. Actual performance may vary.

² Measured using PPS standard calibration and test equipment – includes repeatability errors, noise and linearity