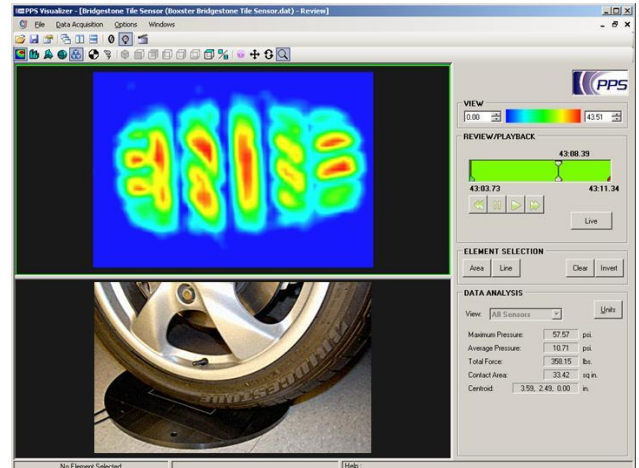




Tire Pressure Measurement



Tire Tread Pressure Measurement System (TTPMS)

PRODUCT OVERVIEW

PPS's *Tire Tread Pressure Measurement System (TTPMS)* is a high-speed (scan rate of up to 220hz in one configuration) industrial tactile sensor system used by tire manufacturers and automobile manufacturers for capturing static or dynamic tire tread pressure patterns during quality control testing or tire tread design analysis.

TTPMS was designed for tire manufacturers who need to accurately capture the tire/road interface in dynamic, real-world conditions, versus the static conditions of a lab where other solutions are often used. This real-world data capture enables designers to develop the most optimal tire tread patterns to maximize overall tire performance.

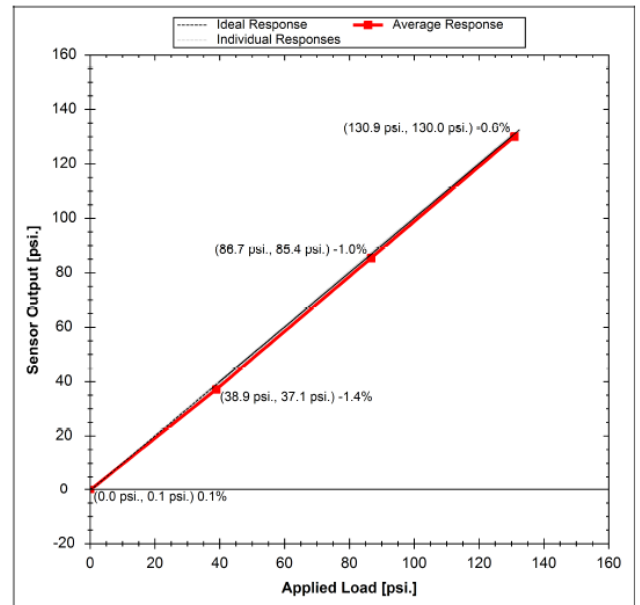
TTPMS consists of an industrial tactile sensor, which attaches to a computer with a USB 2.0 interface either directly in one system configuration or via T4500 electronics in another, to run PPS's Chameleon image capture and analysis software. This industry-leading software is fully featured which means it can export replay, save test data, and perform analysis functions.

KEY SYSTEM FEATURES AND BENEFITS

- **High resolution highly sensitive and repeatable array sensor** allows designers to develop the best tire designs based on highly reliable, high resolution data.
- **High performance capacitive sensing technology** saves time and improves results by significantly reducing recalibration and repeated tests allowing developers to resolve problems and answer questions faster.
- **Rugged mounting platform** for attaching to other test equipment such as shaker tables to better simulate actual driving conditions.
- **Captures dual external analog voltage signals** (-10V to +10V) allows the system to work with other test equipment in the lab.
- **High speed USB 2.0 interface** provides up to 220Hz scan rate in one of the configuration.
- **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	5491	5370
Total Sensor Area	250x260 mm	359x411 mm
Active Sensing Area	160x192 mm	205x301 mm
Element Count	1920 (48x40)	4096 (64x64)
Spatial Resolution	4x4 mm	4.7x3.125 mm
Sensor Thickness	7.6mm	0.35mm

SENSOR CHARACTERISTICS AND PERFORMANCE ¹	
Pressure Range	75 or 150 PSI
Pressure Sensitivity	0.2%
Signal to Noise Ratio (SNR)	500:1
Repeatability Error	0.4%
Linearity	99.5%
Accuracy Error ²	<=4%
Contact Surface Material	Polyimide
Cable Length	59 in (1.5m)
Operating Temperature	-5°C to 85°C



ELECTRONICS SPECIFICATIONS		
	5491	5370
Sample Rate	220Hz (interlaced)	8 Hz
Computer Interface	USB 2.0	USB 2.0
ADC Resolution	16 bit	12 bit
Input Voltage	5	5V
Input Power	2W	2W
Enclosure Size	NA	6.5x6.2x1 in. (16.5x15.8x2.5 cm)
Weight	NA	1.43 lbs. (650 g)

SYSTEM COMPONENTS

- One Tire Tread Sensor of chosen design
- Four Signal conditioning electronics or USB 2.0 interface
- Chameleon Visualization and Data Acquisition Software
- Synchronized video capture function and hardware
- 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