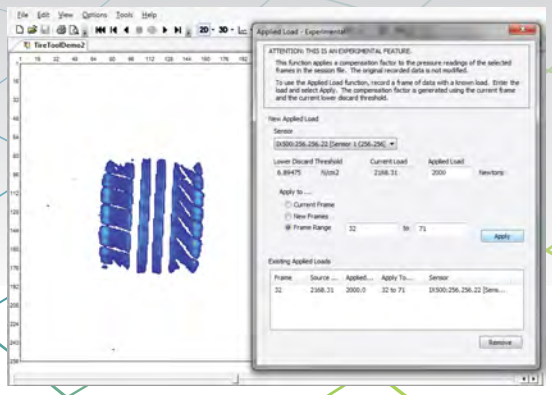
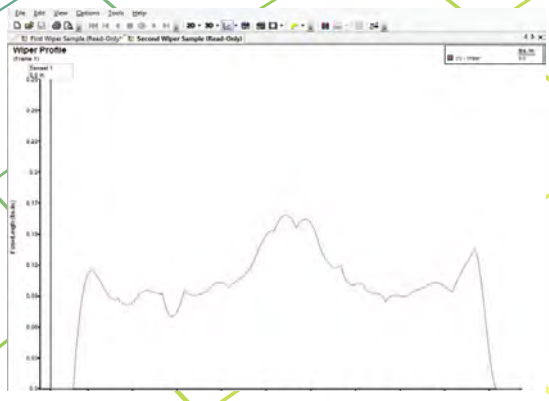
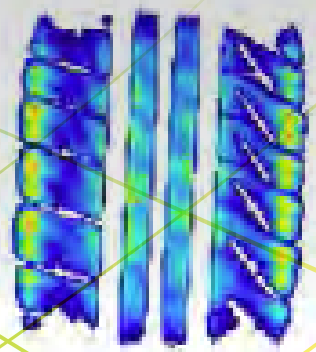
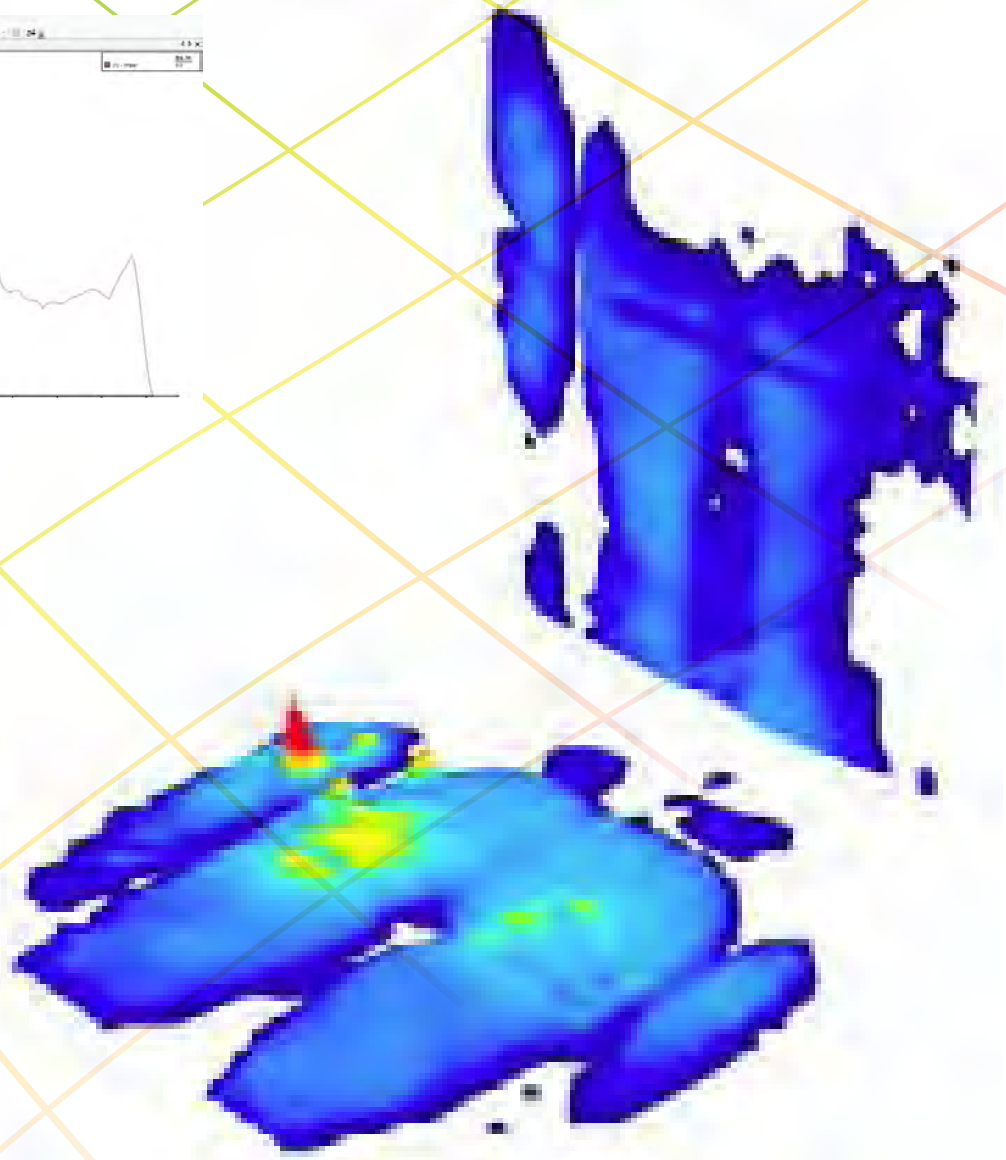
SOFTWARE









SOFTWARE **X3 PRO**

PRODUCT DESCRIPTION

The X3 PRO Software is an essential part of the X3 PRO product series. Developed with the power user in mind, the X3 PRO Software features a faster, more powerful engine with enhanced analytical tools. The software package offers 2D, 3D, and graphing view options. The data is viewed dynamically and recorded as a XSENSOR file format. Recorded data can be exported for further analysis or imported into other applications such as Matlab.

The X3 PRO software has many analytical tools for general research purposes as well as specific functions and tools for automotive and tire designers. Easily stream video along pressure images, create sensor groupings, make measurements, and compare multiple files.

PRO V6.0 – SOFTWARE FEATURES

Engine Performance Improvements

- Collected data is saved immediately to the disk, thereby reducing the risk of data loss
- Over 100% faster frame rate for a 4 sensor pack system with 65,536 sensing points
- Load or save up to 500GB files in under 1 second
- Allows for sessions with up to 100 million frames or 500GB of data

File Comparison Tools

- Simultaneous playback of up to 4 files
- Multiple frame and file comparisons
- Windshield wiper sensor users can graph multiple files for product and data comparisons

Measurement Tools

- Line measurement allows users to measure pressure image dimensions
- Area measurement allows users to calculate areas within a pressure image

Imaging Tools

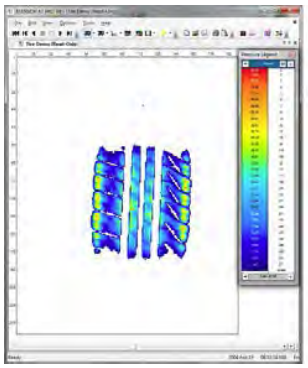
- Thumbnail preview strip displays each frame in filmstrip format
- Thumbnail view includes preview of attached videos, photos, and notes
- Improved overall frame navigation
- Improved 2D zoom functionality

Export/Analysis Tools

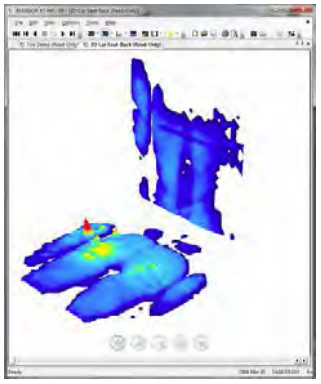
- Copy, paste and select pressure values from 2D image directly into spreadsheet
- Export a sensor group in its original shape directly into a spreadsheet
- Copy and paste cross-section values into spreadsheets (cross-hair or average)
- Export files into html-viewable format

* Dual core processor computer required. Also dependent on sensor configuration.

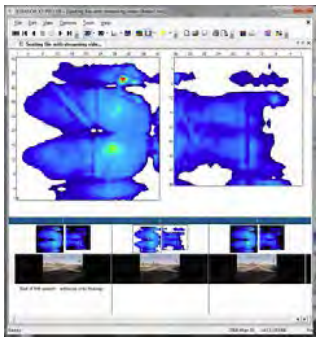
X3 PRO Software



2D Car Tire
(IX500:256.256.22)



3D Car Seat
(LX100:48.48.02)



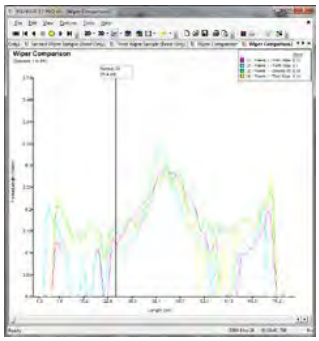
Video Streaming Car Seat
(PX100:40.40.02 & PX100:36.36.02)

SOFTWARE **X3 PRO**

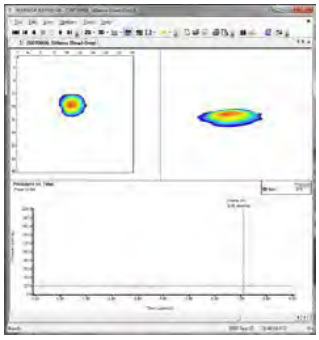
X3 Pro Software

FEATURES	
X3 Connection Status	View the connection status of all sensors, sensor packs, and electronics* connected to your computer. Toggle the view mode to see sensor usage statistics, such as when the sensor was last calibrated and the length of time the sensor has recorded data.
Dynamic Preview Mode	View live, dynamic data before recording to ensure relevant information is captured.
Record Live Pressure Imaging Sessions	Capture and record pressure imaging data for analysis and review.
Time and Recording Triggers	Set recording session delays and triggers to capture specific data.
Pressure Movie Creation	Generate movie files in XSENSOR software to share dynamic sessions with those who do not have XSENSOR software.
Video Sync	Record and synchronize digital video (DV) cameras, using IEEE 1394 FireWire or USB webcams to XSENSOR pressure imaging files.

VIEWS	
Each XSENSOR view mode has multiple settings and options to control sensor data viewing:	
2D	Top view of the sensor shows pressure levels in different colours defined by the pressure isobar legend; view can be rotated or flipped to match positioning.
3D	Perspective view of the sensor shows pressure levels in different colours and height contours; rotate view in any direction to maximize visual clarity.
Frame Compare	Show up to 4 snapshots side-by-side for easy comparison.
Pressure vs. Time	Graph pressure readings over time; pressure reading can be either peak or average for the sensor.
Numeric Mode	2D mode shows numerical pressure readings in each sensing cell and dynamic full-colour display.



2D Wiper Blade Comparison (PX100:1.64.02)

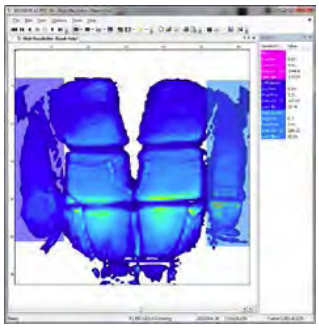


Air Pressure on Sensor (PX100:36.36.02)

X3 PRO

ANALYSIS AND STATISTICS	
X3 PRO features help support the dynamic analysis of pressure readings within a user-defined group or over the entire sensor pad.	
Peak Pressure	Monitor the highest pressure on one or more cells of a given pressure imaging data frame.
Average Pressure	Calculate an average pressure over the entire sensor surface.
Contact Area	Calculate area of the sensor loaded by a subject.
Sensor Cell-Group Analysis	Define groups of sensing cells for separate analysis from the rest of the pressure image. The same statistical analysis tools for the entire system can be applied to sensor cell groups. Define group templates to facilitate sensor cell-group analysis and measure the statistical variance of the sensor output in your defined sensor groups.
File Compare	Examine up to four pressure imaging sessions simultaneously to compare and analyze data.

Clutch Disc Pressure on Sensor (IX500:256.256.22)



Sensor Groups & Statistics (PX100:100.100.05)

SOFTWARE **X3 PRO V7.0**

PRODUCT DESCRIPTION

X3 PRO v7.0

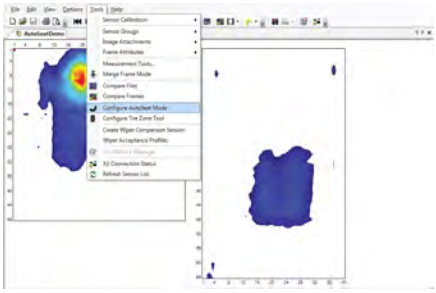
X3 PRO v7.0 provides advanced automated features for design and test engineers. Building on the stable and secure recording and data integrity platform of PRO v6.0, this latest release focuses on providing more effective process and reporting tools for automotive tire design and performance engineers.

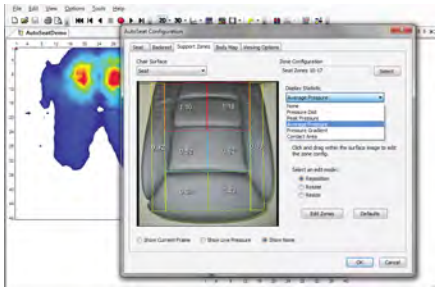
PRO v7.0 – NEW FEATURE HIGHLIGHTS

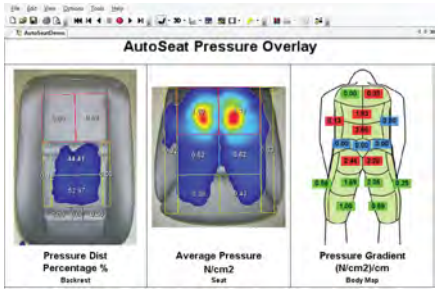
AutoSeat Mode

Tools for layout and reporting

A comprehensive tool for automotive and aerospace seating customers that provides photo import, pressure image overlay, h-point sizing and adjustment, and surface area reporting. Seating design and test engineers can now overlay pressure images on photos or graphics and adjust the pressure image size and positioning to specic h-point references. Groupings can be created, displaying information in the images and on a body form. Data can be presented in pressure gradients, average pressure, contact area and more.



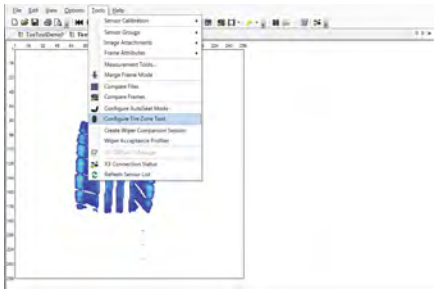


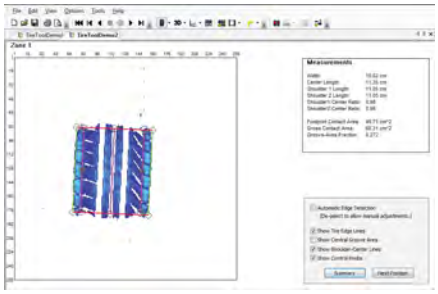


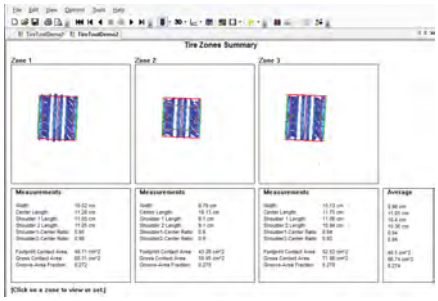
Tire Zone Mode

Tools for automated measurements, ratios, averages and reporting

A systematic process for recording tire pressure images that provides the user with the option to select specific images and calculate the lengths, ratios, contact areas, gross contact areas, and groove area fractions. The process allows for the adjustment of applied measurement lines and the automatic recalculation of measurements.







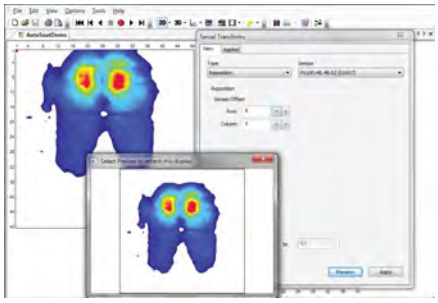
XSENSOR® Technology Corporation
Innovators in Pressure Imaging

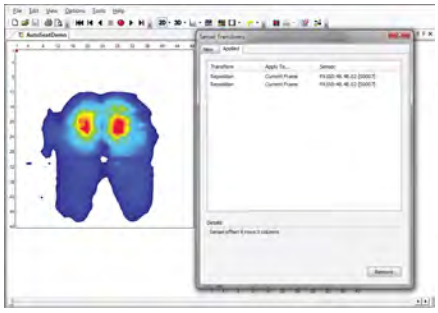
SOFTWARE **X3 PRO V7.0**

X3 PRO v7.0

Sensel Transform

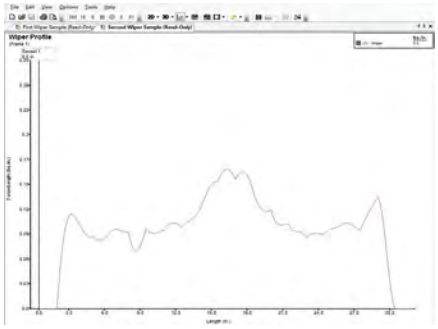
Functionality allowing the user to move the pressure image within the window to easily align with previous frames or images. Misalignment or movement of sensors can be adjusted and aligned afterwards to provide more consistency in image alignment for averaging and analysis.





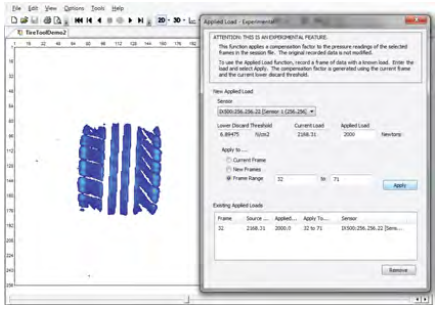
Wiper Blade Acceptance Parameters

X3 PRO v7.0 provides the ability to use specic X3 high speed sensors and record at rates up to 500 frames per second. For the first time, pressure imaging can effectively be used in high speed data acquisition environments such as automotive rear impact testing for car seat safety and performance. High speed data acquisition combined with optimized X3 sensors provides insights into research applications that were never possible until now.



Applied Load Calculations

Users can apply external load measurements to a frame, a series of frames, or a file and the data will be adjusted accordingly. The original data is always kept intact, allowing the user to revert to original data or apply different load calculations to the pressure readings.



Other Features

- Zero pressure filters
- Centre of pressure trails
- Advanced merge frame functionality