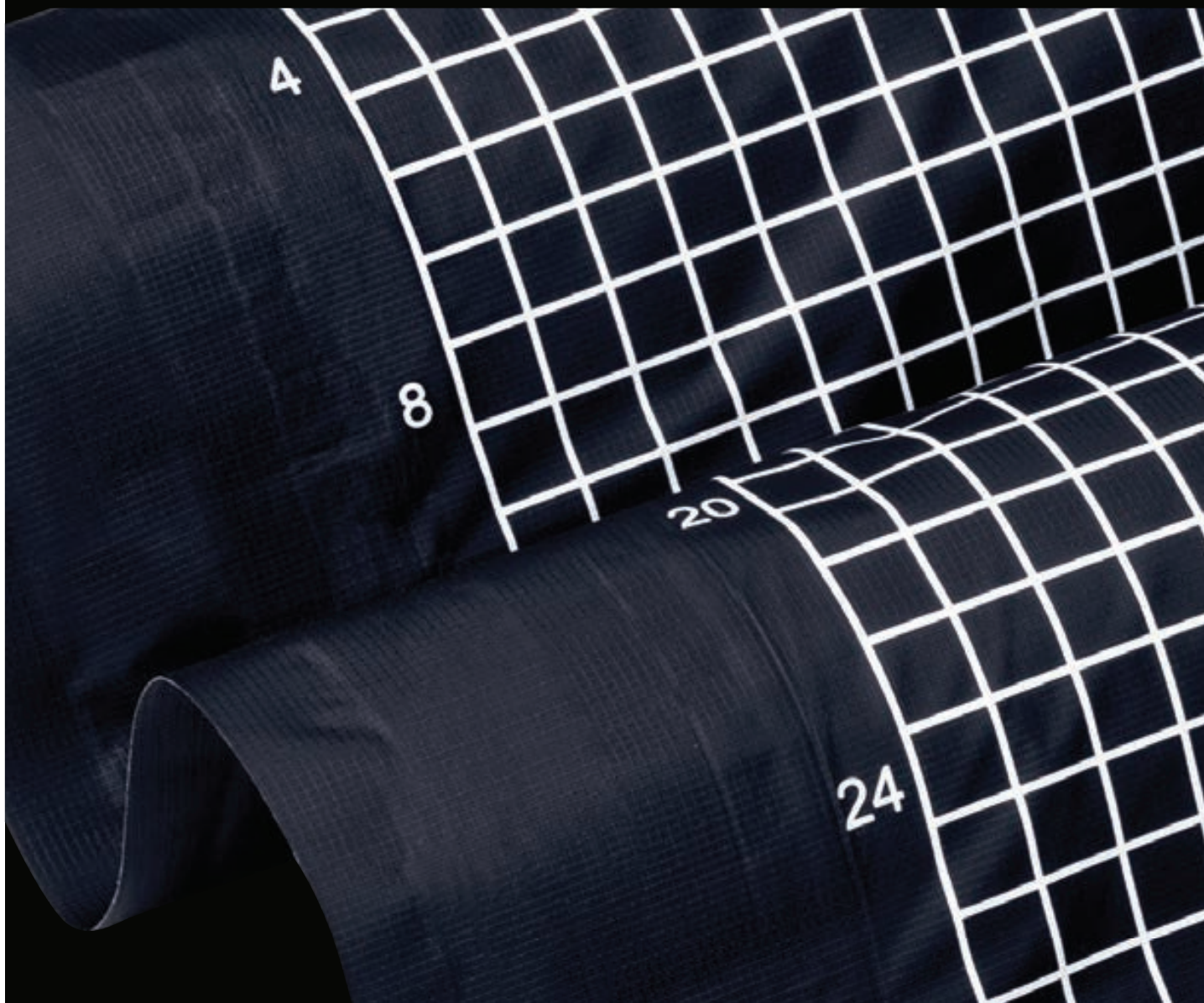


# TEST & MEASUREMENT

PRODUCT CATALOGUE



**XSENSOR**® Technology  
Corporation

## PRODUCT DESCRIPTION

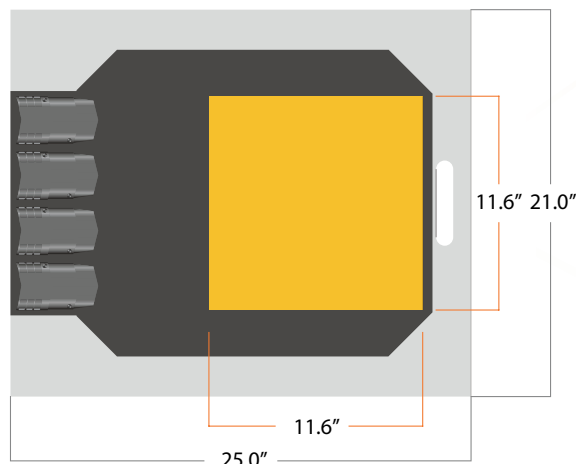
The X3 IX500:256.256.22 is a high pressure sensor designed for automotive tire testing. The sensor has a 1.15mm pitch with 65,536 sensing points and is unsurpassed in terms of accuracy and durability. The high resolution provides very clear image quality for tire tread viewing and analysis. The sensor is mounted on a Lexan backing to provide additional durability. The IX500:256.256.22 has been used for both lab and environmental testing.

IX500:256.256.22

SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-300psi	
	3.4-69N/cm <sup>2</sup> 7-207N/cm <sup>2</sup>	
Spatial Resolution	0.5"	1.15mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	6 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	25" x 21"	63.5cm x 53.3cm
Sensing Area	11.6" x 11.6"	29.5cm x 29.5cm
Thickness (Sensing Area, uncompressed)	0.38"	0.1cm
Thickness (Border – cabling side)	0.06"	0.23cm
Border Width (cabling side)	4.75"	12.1cm
Border Width (non-cabling side)	2.63"	6.7cm
Cable	-	-
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH



## KEY FEATURES

- High-resolution sensors with a 1.15 mm pitch (resolution) and 65,536 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing
- Durable sensors that perform well in subsurface (soil/sand) testing

## REQUIREMENTS FOR OPERATION

- 4 X3 Pro Sensor Pack's
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

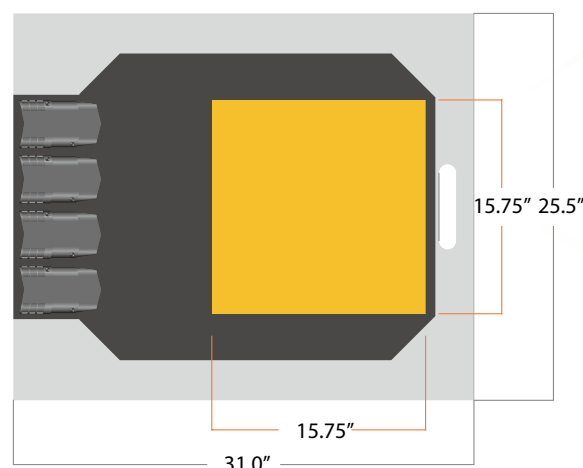
\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

## PRODUCT DESCRIPTION

The X3 IX500:256.256.16 is a truck tire sensor with 65,536 sensing points and unsurpassed accuracy and durability. The sensor has a 1.6mm pitch with 65,536 sensing points and is unrivaled in terms of accuracy and durability. The high resolution provides very clear image quality for tire tread viewing and analysis. The sensor is mounted on a Lexan backing to provide additional durability.

IX500:256.256.16



SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-300psi	
	3.4-69N/cm <sup>2</sup> 7-207N/cm <sup>2</sup>	
Spatial Resolution	0.063"	1.6mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	6 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	25.5" x 31"	64.8cm x 78.7cm
Sensing Area	15.75" x 15.75"	40.6cm x 40.6cm
Thickness (Sensing Area, uncompressed)	0.38"	0.1cm
Thickness (Border – cabling side)	0.06"	0.23cm
Border Width (cabling side)	4.75"	12.06cm
Border Width (non-cabling side)	0.4"	1cm
Cable	-	-
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

## KEY FEATURES

- High-resolution sensors with a 1.6 mm pitch (resolution) and 65,536 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing
- Durable sensors that perform well in subsurface (soil/sand) testing

## REQUIREMENTS FOR OPERATION

- 4 X3 Pro Sensor Pack's
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

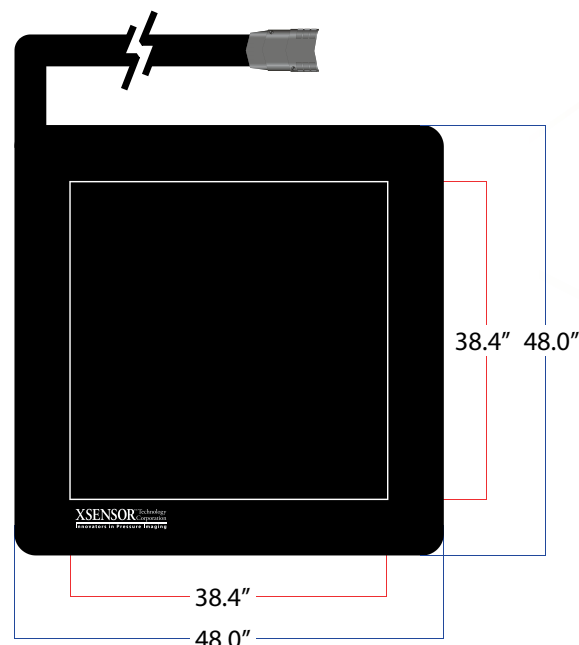
SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH

## PRODUCT DESCRIPTION

The X3 IX500:192.192.05 is the newest addition to the tire sensor family. This sensor has been designed to test large agriculture tires and mining tires with very large tread patterns.

The sensor is mounted onto a supporting sheet of Lexan for additional durability and has a durable urethane cover material for protection from sands and soils. The sensor is supplied with shear-reducing layers which are laid over the sensor to reduce or eliminate shear forces. The IX500:192.192.05 is used in lab and outdoor settings, including subsoil testing for tread impact.

IX500:192.192.05



SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-300psi	
	7-207N/cm <sup>2</sup>	
Spatial Resolution	0.2"	5.08mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	10 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	48" x 48"	121.9cm x 121.9cm
Sensing Area	38.4" x 38.4"	97.5cm x 97.5cm
Thickness (Sensing Area, uncompressed)	0.05"	0.14cm
Thickness (Border – cabling side)	0.09"	0.23cm
Border Width (cabling side)	5.6"	14.2cm
Border Width (non-cabling side)	4"	10.3cm
Cable	43.5" x 2" x 0.5"	110.5cm x 5.1cm x 1.4cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH

## KEY FEATURES

- High-resolution sensors with a 5.08 mm pitch (resolution) and 36,864 sensing points
- Designed for large industrial tire testing
- Excellent for both lab and environmental testing
- Durable sensors that performs well in subsurface (soil/sand) testing
- Sensor is mounted on a Lexan backing for added durability

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

## PRODUCT DESCRIPTION

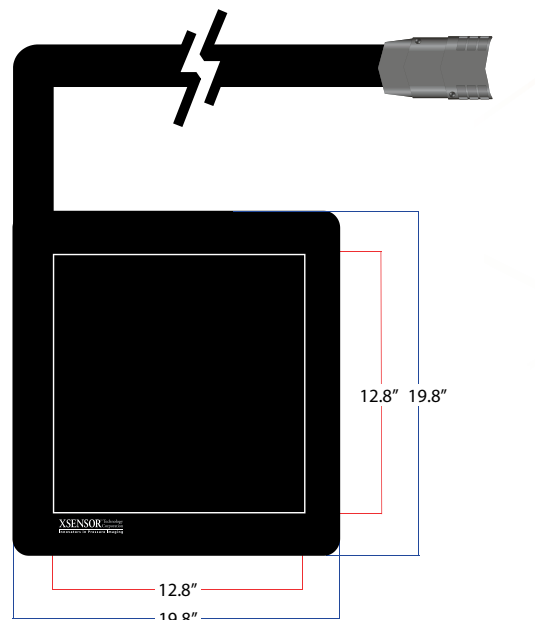
The X3 IX510:128.128.10 is a high pressure sensor with 16,384 sensing points. The sensor has been designed with a tough urethane cover that can withstand outdoor testing for tire applications. The sensor is bendable and can conform to different surfaces. The IX510:128.128.10 provides a combination of higher resolution and faster data acquisition rates so that it can be used in low speed dynamic tire testing.

**IX510:128.128.10**

SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-512psi	
	689N/cm <sup>2</sup> - 353 n/cm <sup>2</sup>	
Spatial Resolution	0.1"	2.54mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	16 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	19.8" x 19.8"	50.2cm x 50.2cm
Sensing Area	12.8" x 12.8"	32.5cm x 32.5cm
Thickness (Sensing Area, uncompressed)	0.04"	0.11cm
Thickness (Border – cabling side)	0.05"	0.13cm
Border Width (cabling side)	4"	10.2cm
Border Width (non-cabling side)	2"	5.1cm
Cable	31.5" x 2" x 0.31"	80cm x 5.1cm x 0.8cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH



## KEY FEATURES

- High-resolution sensors with a 2.54mm pitch (resolution) and 16,384 sensing points
- Designed for large industrial tire testing
- Excellent for both lab and environmental testing
- Durable sensors that performs well in subsurface (soil/sand) testing
- Sensor is mounted on a Lexan backing for added durability

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.



## PRODUCT DESCRIPTION

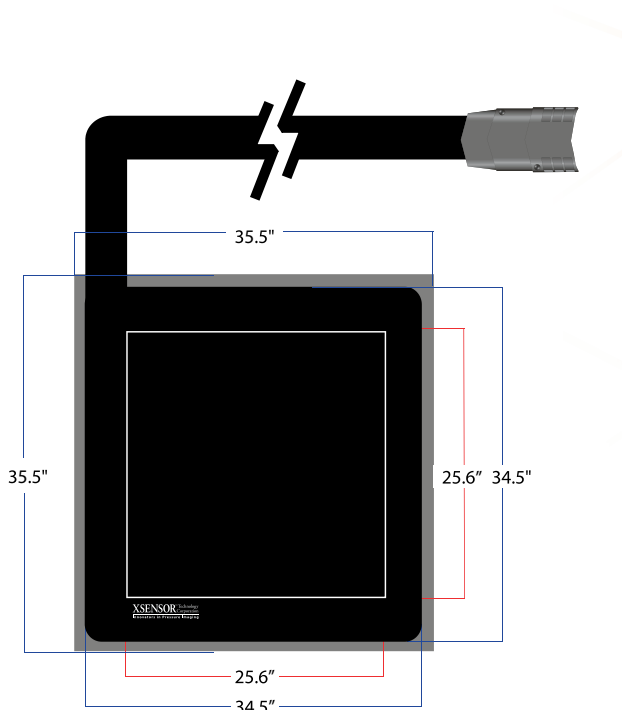
The X3 IX510:128.128.05 is a high pressure sensor with 16,384 sensing points. The sensor has been designed with a tough urethane cover that can withstand outdoor testing for tire applications. The sensor is bendable and can conform to different surfaces. The IX510:128.128.05 provides a combination of higher resolution and faster data acquisition rates so that it can be used in low speed dynamic tire testing.

IX510:128.128.05

SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-512psi	
	6.9-353N/cm <sup>2</sup>	
Spatial Resolution	0.2"	5.08 mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	16 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	34.5" x 34.5"	87.6cm x 87.6cm
Sensing Area	25.6" x 25.6"	65cm x 65cm
Thickness (Sensing Area, uncompressed)	0.04"	0.11cm
Thickness (Border – cabling side)	0.06"	0.15cm
Border Width (cabling side)	5.38"	13.7cm
Border Width (non-cabling side)	3.5"	8.9cm
Cable	43.5" x 2" x 0.31"	110cm x 5.1cm x 0.8cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH



## KEY FEATURES

- High-resolution sensors with a 5.08mm pitch (resolution) and 16,384 sensing points
- Designed for large industrial tire testing
- Excellent for both lab and environmental testing
- Durable sensors that performs well in subsurface (soil/sand) testing
- Sensor is mounted on a Lexan backing for added durability

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

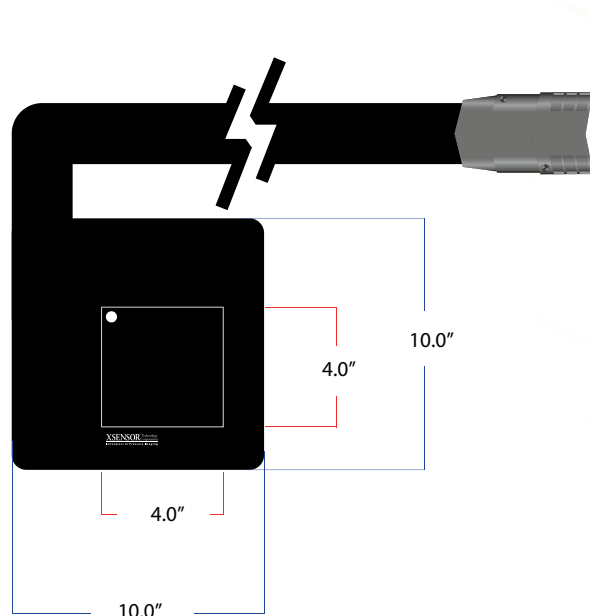
\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

## PRODUCT DESCRIPTION

The X3 IX510:40.40.10 is a high pressure sensor with over 16,000 sensing points. The sensor can be used for measuring hand pressures on surfaces, automated clamping pressures, seal pressures, and for higher pressure research or design testing. The IX510:40.40.10 is a thin and conformable sensor that can fit into tight spaces and can be used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

IX510:40.40.10



SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-512psi	
	6.9-353N/cm <sup>2</sup>	
Spatial Resolution	0.1"	2.54mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	39 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	10" x 10"	25.5cm x 25.6cm
Sensing Area	4" x 4"	10.2cm x 10.2cm
Thickness (Sensing Area, uncompressed)	0.035"	0.09cm
Thickness (Border – cabling side)	0.08"	0.11cm
Border Width (cabling side)	4"	10.2cm
Border Width (non-cabling side)	2"	5.1cm
Cable	31.5" x 2" x 0.16"	80cm x 5.1cm x 0.4cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

## KEY FEATURES

- High-resolution sensors with a 2.54 mm pitch (resolution) and 1,600 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

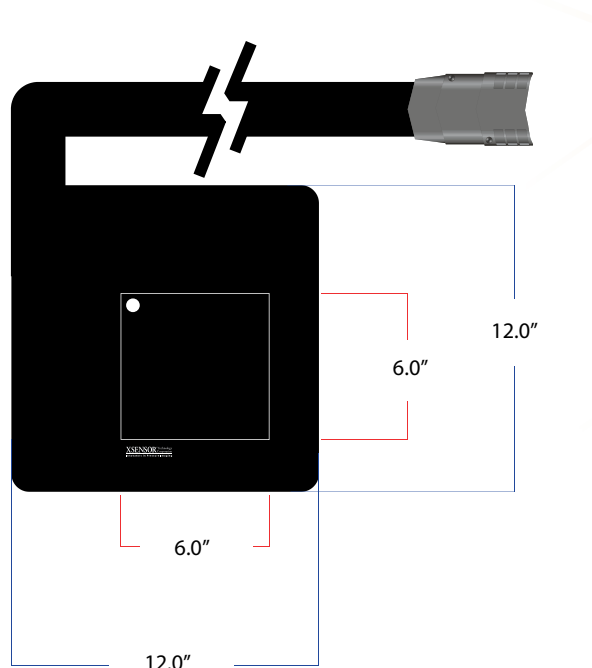
\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH

## PRODUCT DESCRIPTION

The X3 IX510:60.60.10 is a high pressure sensor with 3,600 sensing points. The sensor can be used for measuring hand pressures on surfaces, automated clamping pressures, seal pressures, and for higher pressure research or design testing. The IX510:60.60.10 is a thin and conformable sensor that can fit into tight spaces and can be used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

IX510:60.60.10



SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-512psi	
	6.9-353N/cm <sup>2</sup>	
Spatial Resolution	0.1"	2.54mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	30 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	12" x 12"	30.5cm x 30.5cm
Sensing Area	6" x 6"	15.2cm x 15.2cm
Thickness (Sensing Area, uncompressed)	0.035"	0.09cm
Thickness (Border – cabling side)	0.08"	0.11cm
Border Width (cabling side)	4"	10.2cm
Border Width (non-cabling side)	2"	5.1cm
Cable	31.5" x 2" x 0.16"	80cm x 5.1cm x 0.4cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

## KEY FEATURES

- High-resolution sensors with a 2.54 mm pitch (resolution) and 3,600 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH



## PRODUCT DESCRIPTION

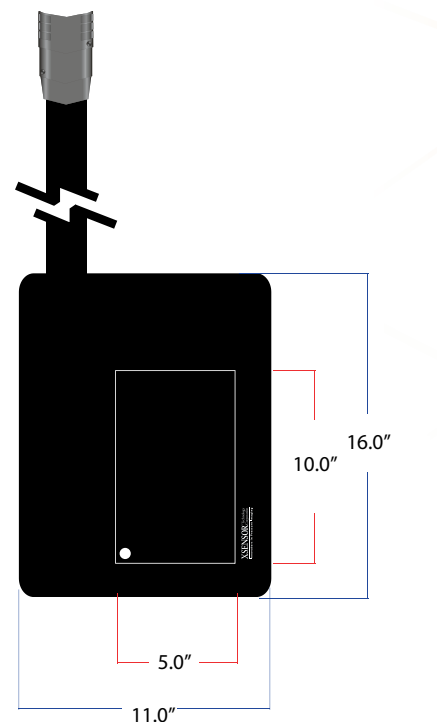
The IX510:50.100.10 sensor is a medium sized high resolution sensor. The sensor has been used for assessing applied pressures from fingers, robotic hands, and other low pressure applications. Due to the resolution and the pressure range, the sensor can detect small changes in pressures and provides very clear images.

**IX510:50.100.10**

SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-512psi	
	6.9-353N/cm <sup>2</sup>	
Spatial Resolution	0.1"	2.54mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	37 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	11" x 16"	28cm x 40.7cm
Sensing Area	5" x 10"	12.7cm x 25.4cm
Thickness (Sensing Area, uncompressed)	0.035"	0.09cm
Thickness (Border – cabling side)	0.04"	0.11cm
Border Width (cabling side)	4"	10.2cm
Border Width (non-cabling side)	2"	5.1cm
Cable	31.5" x 2" x 0.31"	80cm x 5.1cm x 0.8cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH



## KEY FEATURES

- High-resolution sensors with a 2.54 mm pitch (resolution) and 5,000 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing
- Durable sensors that performs well in subsurface (soil/sand) testing

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

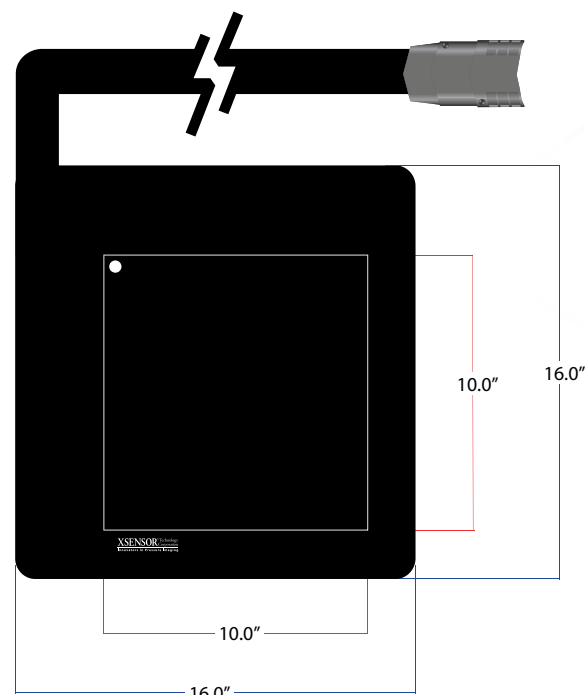
\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

## PRODUCT DESCRIPTION

The IX510:100.100.10 sensor is a medium sized high resolution sensor. The sensor has been used for assessing applied pressures from fingers, robotic hands, and other low pressure applications. Due to the resolution and the pressure range, the sensor can detect small changes in pressures and provides very clear images.

**IX510:100.100.10**



SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-512psi	
	6.9-353N/cm <sup>2</sup>	
Spatial Resolution	0.1"	2.54mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	14 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	16" x 16"	40.7cm x 40.7cm
Sensing Area	10" x 10"	25.4cm x 25.4cm
Thickness (Sensing Area, uncompressed)	0.035"	0.09cm
Thickness (Border – cabling side)	0.04"	0.11cm
Border Width (cabling side)	4"	10.2cm
Border Width (non-cabling side)	2"	5.1cm
Cable	31.5" x 2" x 0.31"	80cm x 5.1cm x 0.8cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

## KEY FEATURES

- High-resolution sensors with a 2.54 mm pitch (resolution) and 10,000 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH

## PRODUCT DESCRIPTION

The IX510:64.64.04 is a stance pad sensor that comes with a Lexan backing.. The sensor has been designed to measure standing and striding foot pressures. A durable urethane cover provides extra protection and durability for heel strike and running movements. The sensor provides a high frame rate for recording foot movements. The IX510:64.64.04 generates foot profiles and analyzes foot pressures from standing, to walking, to running.

### SENSING

<b>Sensor Technology</b>	Capacitive Pressure Imaging	
<b>Pressure Range</b>	1-100 psi	
	0.67-68N/cm <sup>2</sup>	
<b>Spatial Resolution</b>	0.25"	6.35mm
<b>Accuracy</b>	± 10% full scale*	
<b>Sampling Frame Rate</b>	24 frames/s**	

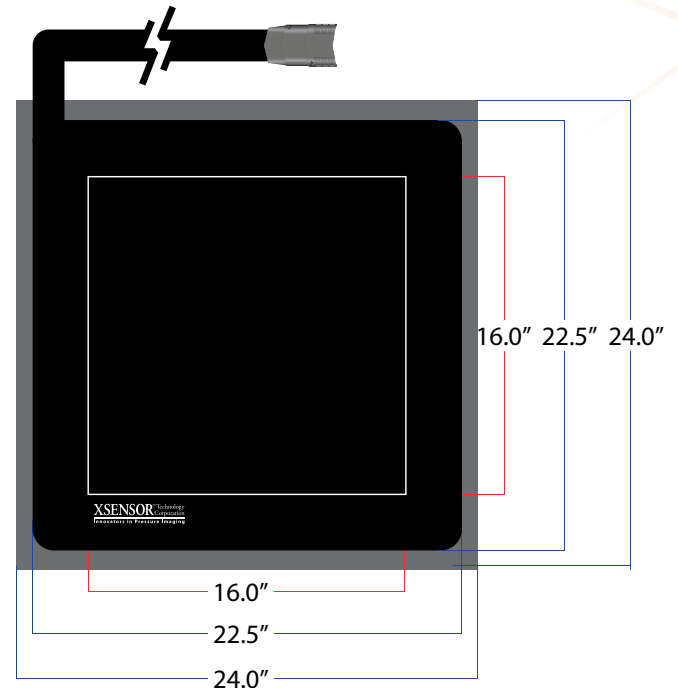
### PHYSICAL CHARACTERISTICS

<b>Total Area</b>	22.5" x 22.5"	57.1cm x 57.1cm
<b>Sensing Area</b>	16" x 16"	40.6cm x 40.6cm
<b>Thickness</b> (Sensing Area, uncompressed)	0.05"	0.13cm
<b>Thickness</b> (Border – cabling side)	0.063"	0.16cm
<b>Border Width</b> (cabling side)	4.5"	11.4cm
<b>Border Width</b> (non-cabling side)	2"	5.1cm
<b>Cable</b>	26.5" x 2" x 0.16"	118cm x 5.1cm x 0.4cm
<b>Connector</b>	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

### SENSING

<b>Ambient Temperature</b>	10°C–40°C
<b>Ambient Humidity</b>	5% to 90% RH

IX510:64.64.04



## KEY FEATURES

- High-resolution sensors with a 6.35mm pitch (resolution) and 4,096 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both clinical and dynamic testing
- Durable sensor that is portable with plug and play functionality

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.  
\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

## PRODUCT DESCRIPTION

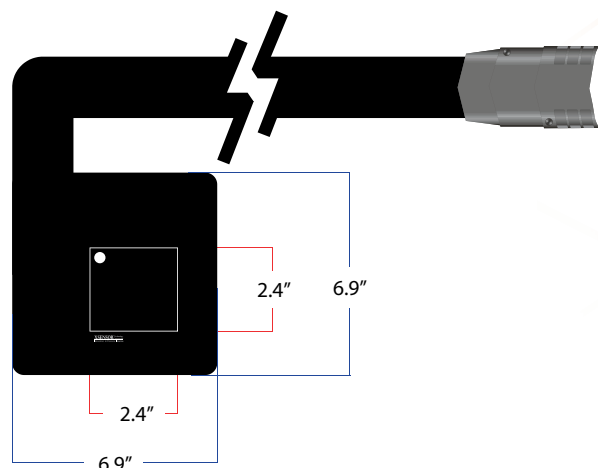
The IX510:12.12.05 is a high pressure sensor with 144 sensing points. The sensor can be used for measuring tactile pressures on surfaces and for higher pressure research or design testing. The IX510:12.12.05 is a thin and conformable sensor that can fit into tight spaces and can be used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

### IX510:12.12.05

SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-512psi	
	6.9-353N/cm <sup>2</sup>	
Spatial Resolution	0.2"	5.08mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	95 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	6.9" x 6.9"	17.5cm x 17.5cm
Sensing Area	2.4" x 2.4"	6.1cm x 6.1cm
Thickness (Sensing Area, uncompressed)	0.03"	0.09cm
Thickness (Border – cabling side)	0.07"	0.18cm
Border Width (cabling side)	3"	7.7cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	46.5" x 1" x 0.16"	118cm x 2.5cm x 0.4cm
Connector	4.76" x 2.76" x 0.09"	12.1cm x 7cm x 2.3cm

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH



## KEY FEATURES

- High-resolution sensors with a 5.08 mm pitch (resolution) and 144 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces

## REQUIREMENTS FOR OPERATION

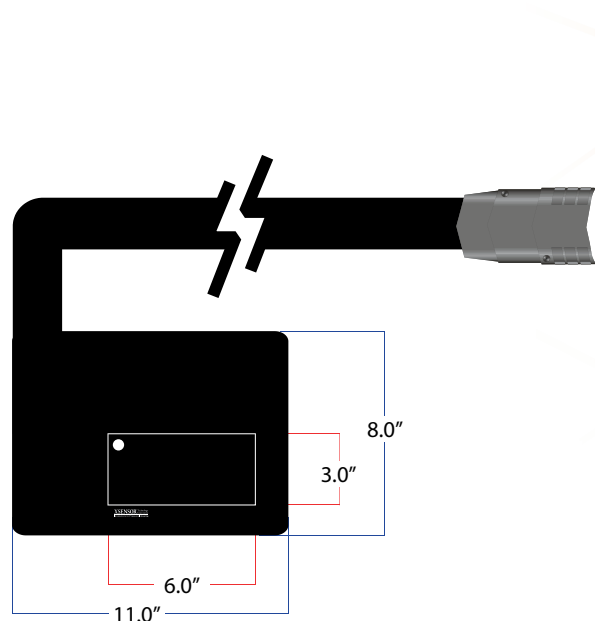
- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.  
\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

## PRODUCT DESCRIPTION

The IX510:15.30.05 is a high pressure sensor with 450 sensing points. The sensor can be used for measuring tactile pressures on surfaces, automated clamping pressures, seal pressures, and for higher pressure research or design testing. The IX510:15.30.05 is a thin and conformable sensor that can fit into tight spaces and can be used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

IX510:15.30.05



### SENSING

<b>Sensor Technology</b>	Capacitive Pressure Imaging	
<b>Pressure Range</b>	10-512psi	
	6.9-353Ncm <sup>2</sup>	
<b>Spatial Resolution</b>	0.2"	5.08mm
<b>Accuracy</b>	± 10% full scale*	
<b>Sampling Frame Rate</b>	95 frames/s**	

### PHYSICAL CHARACTERISTICS

<b>Total Area</b>	8" x 11"	20.3cm x 27.9cm
<b>Sensing Area</b>	3" x 6"	7.6cm x 15.2cm
<b>Thickness</b> (Sensing Area, uncompressed)	0.03"	0.09cm
<b>Thickness</b> (Border – cabling side)	0.07"	0.18cm
<b>Border Width</b> (cabling side)	3.5"	8.9cm
<b>Border Width</b> (non-cabling side)	1.5"	3.8cm
<b>Cable</b>	43.5" x 2" x 0.16"	110.5cm x 5.1cm x 0.4cm
<b>Connector</b>	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

### SENSING

<b>Ambient Temperature</b>	10°C–40°C
<b>Ambient Humidity</b>	5% to 90% RH

## KEY FEATURES

- High-resolution sensors with a 5.08 mm pitch (resolution) and 450 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

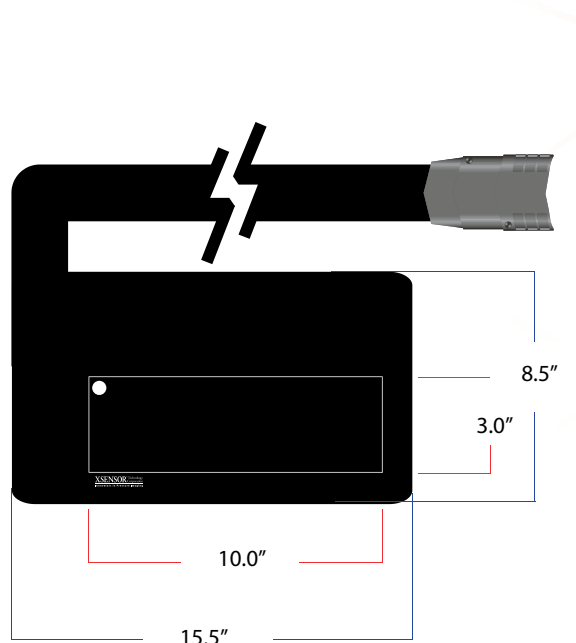
\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

## PRODUCT DESCRIPTION

The IX510:15.50.05 is a high pressure sensor with 750 sensing points. The sensor can be used for measuring tactile pressures on surfaces, automated clamping pressures, seal pressures, and for higher pressure research or design testing. The IX510:15.50.05 is a thin and conformable sensor that can fit into tight spaces and can be used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

IX510:15.50.05



SENSING	
Sensor Technology	Capacitive Pressure Imaging
Pressure Range	10-512psi
	6.9-353Ncm <sup>2</sup>
Spatial Resolution	0.2" 5.08mm
Accuracy	± 10% full scale*
Sampling Frame Rate	95 frames/s**

PHYSICAL CHARACTERISTICS		
Total Area	8.5" x 15.5"	21.6cm x 39.4cm
Sensing Area	3" x 10"	7.6cm x 25.4cm
Thickness (Sensing Area, uncompressed)	0.03"	0.09cm
Thickness (Border – cabling side)	0.07"	0.18cm
Border Width (cabling side)	4"	10.2cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	43.5" x 2" x 0.16"	110.5cm x 5.1cm x 0.4cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

## KEY FEATURES

- High-resolution sensors with a 5.08 mm pitch (resolution) and 750 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

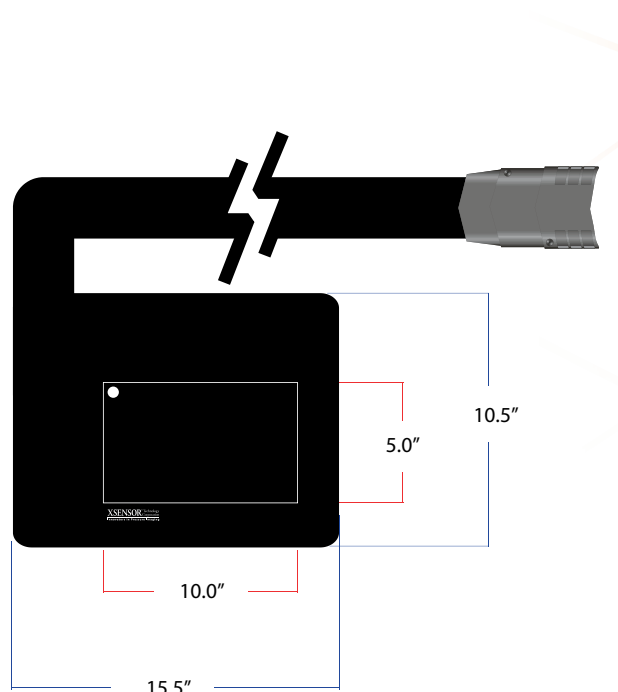
SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH



## PRODUCT DESCRIPTION

The IX510:15.25.50.05 is a high pressure sensor with 1,250 sensing points. The sensor can be used for measuring tactile pressures on surfaces, automated clamping pressures, seal pressures, and for higher pressure research or design testing. The IX510:15.30.05 is a thin and conformable sensor that can fit into tight spaces and can be used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

IX510:25.50.05



SENSING	
Sensor Technology	Capacitive Pressure Imaging
Pressure Range	10-512psi
	6.9-353Ncm <sup>2</sup>
Spatial Resolution	0.2" 5.08mm
Accuracy	± 10% full scale*
Sampling Frame Rate	40 frames/s**

PHYSICAL CHARACTERISTICS		
Total Area	10.5" x 15.5"	26.7cm x 39.4cm
Sensing Area	5" x 10"	12.7cm x 25.4cm
Thickness (Sensing Area, uncompressed)	0.03"	0.09cm
Thickness (Border – cabling side)	0.07"	0.18cm
Border Width (cabling side)	4"	10.2cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	43.5" x 2" x 0.16"	110.5cm x 5.1cm x 0.04cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

## KEY FEATURES

- High-resolution sensors with a 5.08 mm pitch (resolution) and 1,250 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

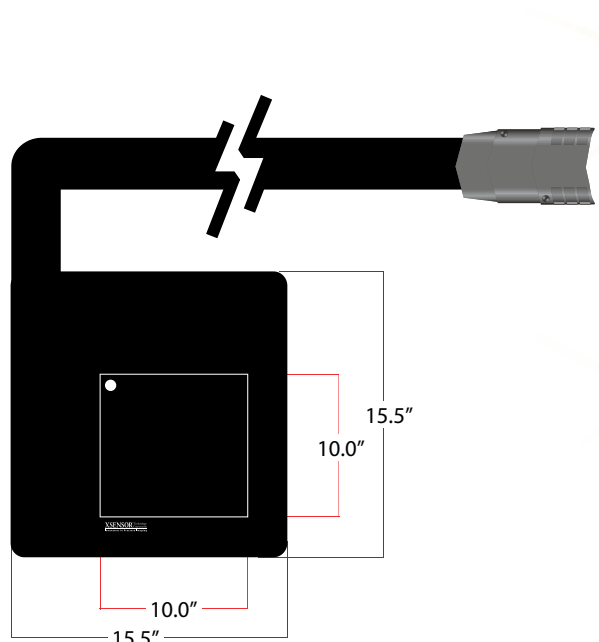
\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH

## PRODUCT DESCRIPTION

The IX510:50.50.05 is a high pressure sensor with 2,500 sensing points. The sensor can be used for measuring tactile pressures on surfaces, automated clamping pressures, seal pressures, and for higher pressure research or design testing. The IX510:50.50.05 is a thin and conformable sensor that can fit into tight spaces and can be used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

### IX510:50.50.05



SENSING		
Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	10-512psi	
	6.9-353N/cm <sup>2</sup>	
Spatial Resolution	0.2"	5.08mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	36 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	15.5" x 15.5"	39.4cm x 39.4cm
Sensing Area	10" x 10"	25.4cm x 25.4cm
Thickness (Sensing Area, uncompressed)	0.03"	0.09cm
Thickness (Border – cabling side)	0.04"	0.11cm
Border Width (cabling side)	4"	10.2cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	43.5" x 2" x 0.16"	110.5cm x 5.1cm x 0.4cm
Connector	4.76" x 2.76" x 0.9"	12.1cm x 7cm x 2.3cm

SENSING	
Ambient Temperature	10°C–40°C
Ambient Humidity	5% to 90% RH

## KEY FEATURES

- High-resolution sensors with a 5.08 mm pitch (resolution) and 2,500 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces

## REQUIREMENTS FOR OPERATION

- X3 Pro Sensor Pack
- X3 Pro Platform
- X3 Pro Power Supply
- X3 Pro Software

\* When verified using the standard XSENSOR verification process.

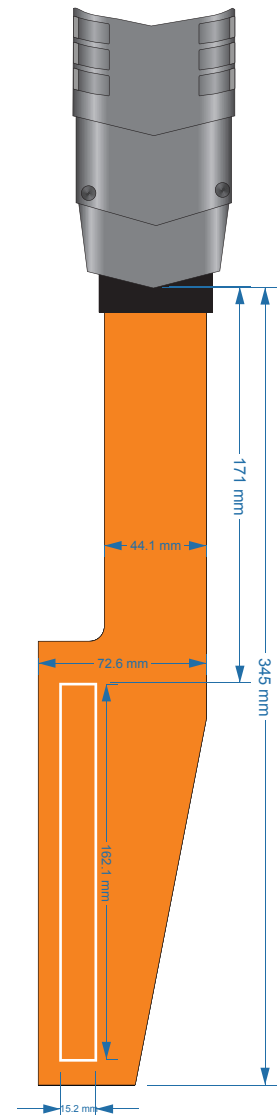
\*\*Sampling rate based on using X3 PRO Electronics. Frame rate may vary based on computer configuration.

IX510:3.64.05-10

## PRODUCT DESCRIPTION

The IX510.3.64.05-10 has been designed for use as a car and truck tire bead sensor. With a silicon based lubricant the sensor is placed between the bead on the tire rim and the tire. The sensor provides real-time pressure readings for both the heel and toe of the bead. The sensor is calibrated and designed to withstand multiple uses. This sensor can also be used to test high pressure applications for rollers or presses.

SENSOR SPECIFICATIONS	
Overall Dimensions (not including cabling)	73mm x 345mm
Sensing Area Dimensions	15mm x 162mm
Sensor Cell Resolution	5.08mm x 2.54 mm
Border Thickness	.75mm +/- .1mm
Sensing Area & Surrounding Thickness	1mm +/- .1mm
Cable Thickness	.75mm +/- .1mm
Sensor Cover Material	Copper
Sensor Area Markings	Outline only
Cable Dimensions	17mm x 44mm x .7mm
Connector Dimensions (Each Connector)	121mm x 70mm x 23mm
Pressure Range	10-512 psi - Extrapolates to 1024
Calibration Accuracy	+/- 10% FS



# SOFTWARE

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## PRODUCT DESCRIPTION

The PRO V8 Software is an essential part of the PRO V8 product series. Developed with the power user in mind, the PRO V8 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 PRO V8 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 – 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

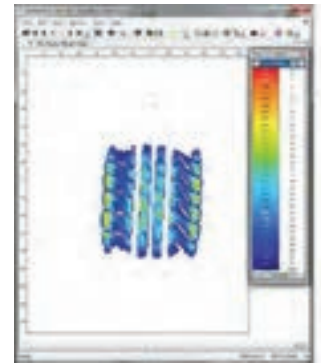
- Thumbnail preview strip displays each frame in filmstrip format
- Thumbnail view includes preview of attached videos, photos, and notes
- Improved overall frame navigation
- Improved 2D zoom functionality

### Export/Analysis Tools

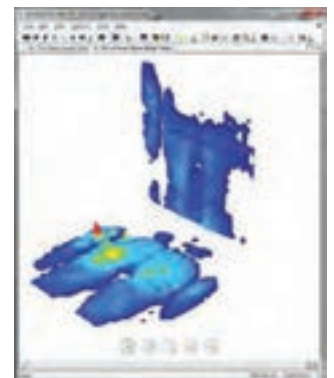
- Copy, paste and select pressure values from 2D image directly into spreadsheet
- Export a sensor group in its original shape directly into a spreadsheet
- Copy and paste cross-section values into spreadsheets (cross-hair or average)
- Export files into html-viewable format

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

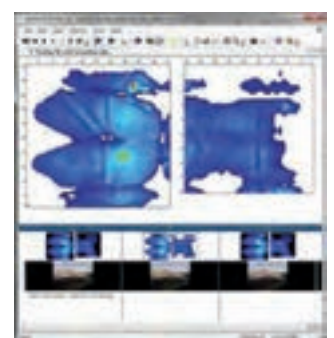
## PRO V8 Software



2D Car Tire  
(IX500:256.256.22)



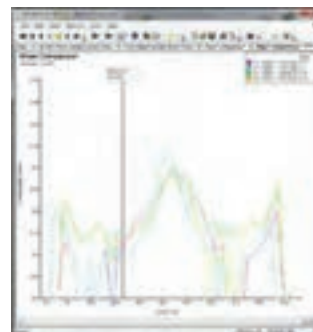
3D Car Seat  
(LX100:48.48.02)



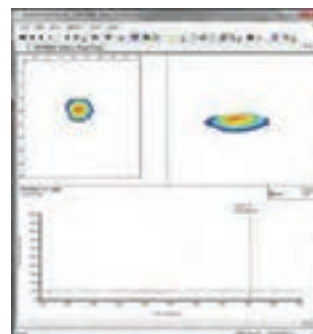
Video Streaming Car Seat  
(PX100:40.40.02 & PX100:36.36.02)

## PRO V8 Software

FEATURES	
<b>X3 Connection Status</b>	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.
<b>Dynamic Preview Mode</b>	View live, dynamic data before recording to ensure relevant information is captured.
<b>Record Live Pressure Imaging Sessions</b>	Capture and record pressure imaging data for analysis and review.
<b>Time and Recording Triggers</b>	Set recording session delays and triggers to capture specific data.
<b>Pressure Movie Creation</b>	Generate movie files in XSENSOR software to share dynamic sessions with those who do not have XSENSOR software.
<b>Video Sync</b>	Record and synchronize digital video (DV) cameras, using IEEE 1394 FireWire or USB webcams to XSENSOR pressure imaging files.



2D Wiper Blade Comparison  
(PX100:1.64.02)



Air Pressure on Sensor  
(PX100:36.36.02)

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



# XSENSOR® Pro V8 PRESSURE IMAGING SOFTWARE

The most powerful pressure imaging software just got better. Introducing ProV8.

XSENSOR's Pro software has been the industry leader for pressure testing and measurement for years. Pro software provides a dynamic way for design and test engineers to gather pressure data in high resolution and process the information for comparisons and calculations. It's ease-of-use, stability and data integrity makes it the go-to tool for automotive and performance engineers working in a wide range of applications.

Pro software features include:

- Record live, real-time interface pressures
- View pressure images in 2d and 3d
- Stream video
- Analyze, review, and export pressure data:
  - Select frames and sensor groups within recordings
  - Compare frames
  - Analyze peaks/averages
- Advanced toolsets for tire/seating/wiper design

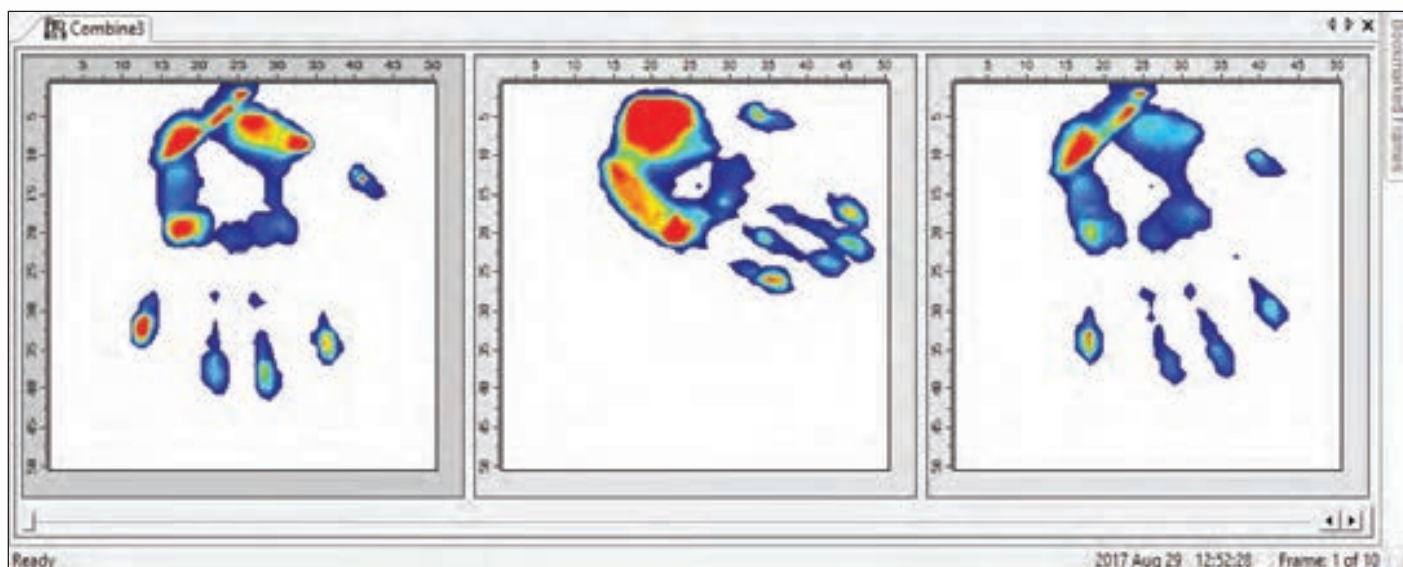
## WHAT'S NEW IN VERSION 8?

### BATCH EXPORT OF RAW OR CALIBRATED FILES

With the release of ProV8, engineers can now record sessions in RAW mode and then apply a calibration file to one, or more recorded files at the same time. So, no matter where the session is recorded, a single calibration file can be applied to all of the data.

### MERGE RECORDINGS FROM DIFFERENT SENSORS

Sessions can now be merged using sensors of different shapes and sizes and data can be appended or combined into a single continuous file. You can now combine the data from up to eight sensors and have the ability to show them all running simultaneously, side-by-side, within one window.



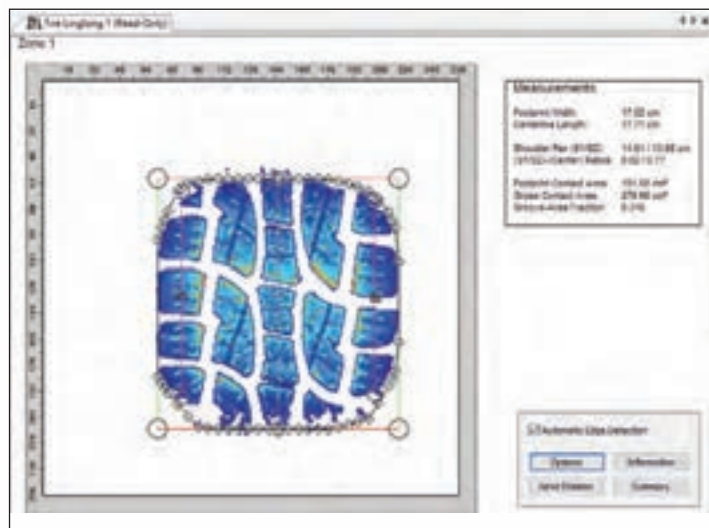
# XSENSOR® Pro V8 PRESSURE IMAGING SOFTWARE

## MORE CONTROL OF DATA EXPORTS

Powerful improvements in export controls make working with large data sets simple. Users can export only the data that is needed for analysis. And with ProV8, a frame, or series of frames can now be exported at intervals determined by the user, with a wider selection of export formats including .xsensor, .csv, and more.

## NEW TIRE DESIGN FEATURES

A new feature of ProV8 is especially beneficial to tire designers who are now better able to measure contact areas and determine how edges of the tire contact patch will be rendered. And the ability to export an .svg file means that pressure images can be printed to scale.



## IMPROVED GRAPHICS

Pro software provides a visually rich environment for viewing and assessing data. With ProV8, sensor margins are more clearly defined, making it easier to focus on areas of interest. Improvements to measurement tools, zoom functionality and sensor positioning makes it easier than ever to see what needs to be seen, and measure what needs to be measured.

## New Features and Enhancements

### Merge Sessions

- Allows the combining of separate session files. Useful for side-by-side data analysis

### Export Sessions

- Scalable Vector Graphics (SVG) 2D export which allows full scale printing via third-party support
- New frame selection methods for exporting frames including regular intervals and frame averaging
- Sensors can be reordered during export
- Bookmarked Frames allows users to highlight frames of interest for quick navigation and export

### User Interface Enhancements

- Sensor Group center of pressure indicators
- Size of "Center of Pressure Indicator" now adjustable
- 2D sensor margins with sensel counts or length units
- Optional manual placement of the sensors in 2D and 3D
- Improved sensel magnification in 2D
- 2D/3D contouring using b-cubic magnification for smoother rendering

### Other

- Raw sessions can be converted to calibrated sessions
- Video capture from two web cameras
- Improved playback performance
- Improved time stamp accuracy
- Recording rate can be modified for existing sessions
- XSNReader DLL allows direct access to XSN files via a C programming interface

# ELECTRONICS

### X3 PRO Platform



### X3 PRO Sensor Pack



#### PRODUCT DESCRIPTION

The **X3 PRO** Platform provides four data ports, control signals, communication relay functionality, electrical isolation and power for the sensor system.

#### FEATURES

<b>Display Functionality</b>	LED: green-power on, amber-malfunction
<b>Sensor Cell Capacity</b>	256x256
<b>Sensor Ports</b>	4

#### POWER

<b>External Power Supply</b>	Input: 100-240 VAC, 47-63Hz, 1.35 A Output: 12 VDC, 3.75 A
<b>Power Consumption</b>	1 W

#### PHYSICAL CHARACTERISTICS

<b>Length</b>	4.5"	11.4cm
<b>Width</b>	3.5"	8.9cm
<b>Height</b>	0.9"	2.3cm
<b>Weight</b>	4.8oz	135g

#### ENVIRONMENT

<b>Operating Range (Temp.)</b>	10°C to 40°C
<b>Ambient Humidity</b>	80% for temperatures up to 31°C and decreasing linearly to 50% at 40°C

#### USB Port

<b>USB Input</b>	USB 2.0, Full Speed
<b>USB Cable (sold separate)</b>	185cm length

#### PRODUCT DESCRIPTION

The **X3 PRO** Sensor Pack contains the sensing electronics of the system including one communication port.

#### FEATURES

<b>Display Functionality</b>	LED: green-power on, amber-malfunction
<b>Sensor Cell Capacity</b>	64x64
<b>Sampling Rate</b>	112,000 sensels/sec
<b>Sampling Resolution</b>	16 bit
<b>Min Cell Measurement Time</b>	35 µsec

#### POWER

<b>Power Consumption</b>	2 W
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#### PHYSICAL CHARACTERISTICS

<b>Length</b>	3.9"	9.8cm
<b>Width</b>	2.5"	6.4cm
<b>Height</b>	0.7"	1.8cm
<b>Weight</b>	6.3oz	180g
<b>Cable Length</b>	78"	198.1cm

#### ENVIRONMENT

<b>Operating Range (Temp.)</b>	10°C to 40°C
<b>Ambient Humidity</b>	80% for temperatures up to 31°C and decreasing linearly to 50% at 40°C

## X3 Node



### PRODUCT DESCRIPTION

The **X3 NODE** provides three additional data ports, control signals, communication relay functionality, electrical isolation and power for the sensor system. An X3 NODE is connected to a port on the X3 PRO Electronics Platform to expand the number of sensor connections.

### FEATURES

Sensor Cell Capacity	192x192
Sensor Ports	3

### POWER

Power Consumption	100 mW
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### PHYSICAL CHARACTERISTICS

Length	2.3"	5.7cm
Width	3.5"	6.4cm
Height	0.7"	1.8cm
Weight	3.0oz	85g
Cable Length	9.4"	24cm

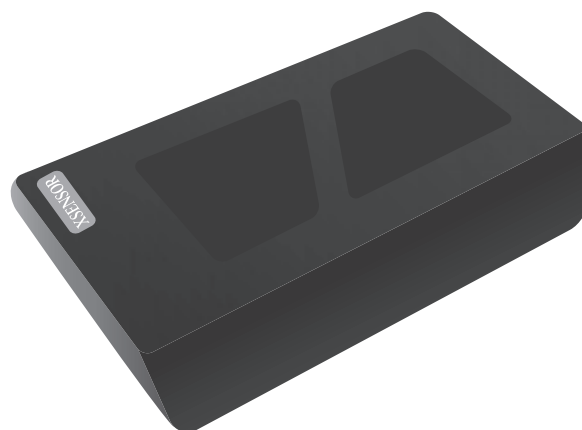
### ENVIRONMENT

Operating Range (Temp.)	10°C to 40°C
Ambient Humidity	80% for temperatures up to 31C and decreasing linearly to 50% at 40°C

## X3 Power Supply



## X3 Battery Pack



### PRODUCT DESCRIPTION

The **X3 Power Supply** is a certified power supply that is sold with country specific power cords.

### POWER

External Power Supply	Input: 100-240 VAC, 47-63 Hz, 1.35 A Output: 12 VDC, 3.75 A
Maximum Output Power	45 W

### PHYSICAL CHARACTERISTICS

Length	5.7"	14.5cm
Width	3.0"	7.6cm
Height	1.7"	4.3cm
Weight	16.6oz	470g
Cable Length – Power Supply	78.7"	200cm
Cable Length – Power Cord	82.7"	210cm

### ENVIRONMENT

Operating Range (Temp.)	10°C to 40°C
Ambient Humidity	80% for temperatures up to 31°C and decreasing linearly to 50% at 40°C

### PRODUCT DESCRIPTION

The **X3 Battery Pack** contains a Lithium-ion Battery and a carry case. The battery is connected from the carry case into the X3 PRO Platform Electronics.

### FEATURES

Battery	Lithium-ion Battery
Recharger	External Lithium-ion Recharger
Run Time	5 hours

### BATTERY POWER

Capacity	13,200 mAh
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### PHYSICAL CHARACTERISTICS OF BATTERY CASE

Length	3.5"	8.9cm
Width	2.5"	6.4cm
Height	2.1"	5.3cm
Weight	13oz	370g
Cable Length	30"	76cm

### Electrical Characteristics

Output Voltage	11.1V
Charge Voltage	12.6V
Cutoff Voltage	9V
Maximum Output Current	2.0A



### X3 Carry Case – Soft shell



### X3 Carry Case – Hard shell



#### PRODUCT DESCRIPTION

The **X3 Carry Case - Soft** is the standard carry case which comes with most systems. The case is designed to carry a rolled sensor and all the corresponding X3 PRO Electronics, X3 PRO Software CD, and User Guide.

#### PHYSICAL CHARACTERISTICS

<b>Length</b>	33"	83.8cm
<b>Width</b>	6"	15.2cm
<b>Height</b>	8"	20.3cm
<b>Weight</b>	24oz	680g

#### PRODUCT DESCRIPTION

The **X3 Carry Case - Hard** is an optional carry case designed for durability. It is primarily used by engineers who require a portable and durable carry case for travel purposes.

#### PHYSICAL CHARACTERISTICS

<b>Length</b>	33 1/2"	85cm
<b>Width</b>	6 1/2"	16.5cm
<b>Height</b>	8"	20.3cm
<b>Weight</b>	120oz	3,400g

**X3 Carry Case – IX500:256:256:22**



**X3 Carry Case – IX500:256:256:16**



**PRODUCT DESCRIPTION**

**The X3 Carry Case – Tire Sensors (IX500:256.256.22)**

The IX500:256.256.22 Tire Sensor Carry Case is fitted to the dimensions of this specific sensor. The case also has compartments for each of the X3 PRO Electronic components and software CD.

**PHYSICAL CHARACTERISTICS**

<b>Length</b>	27"	68.6cm
<b>Width</b>	3"	7.6cm
<b>Height</b>	23"	58.4cm
<b>Weight</b>	48oz	1,360g

**PRODUCT DESCRIPTION**

**The X3 Carry Case – Tire Sensors (IX500:256.256.16)**

The IX500:256.256.16 Tire Sensor Carry Case is fitted to the dimensions of this specific sensor. The case also has compartments for each of the X3 PRO Electronic components and software CD.

**PHYSICAL CHARACTERISTICS**

<b>Length</b>	33"	83.8cm
<b>Width</b>	3"	7.6cm
<b>Height</b>	27"	68.6cm
<b>Weight</b>	56oz	1,587g

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