

XSENSOR[®] Technology Corporation



INTELLIGENT SURFACES,



XSENSOR® Technology Corporation

OPTIMAL OUTCOMES

In the era of big data, it's one thing to be able to collect data, but it's quite another to be able to analyze it, understand it and leverage it to make smarter, more effective decisions. This is where XSENSOR Technology Corporation excels and the reason customers across industries turn to it for its expertise in pressure imaging technology.

Written by Jessica Ferlaino

XSENSOR specializes in interface pressure measurement technology and brings innovative products to the market that set the standard for software accuracy and image quality. The company's technology solutions help users visualize and analyze pertinent data in a more meaningful and impactful way.

XSENSOR's unique capabilities and technology have fostered the creation of reliable, accurate sensors that, when paired with software tools and product support, provide its customers (nurses, therapists, mattress manufacturers and retailers, automotive suppliers of vehicle interiors, tire designers, etc.), with complete solutions that are designed to meet their specific needs.

"For over 20 years, XSENSOR has set the standard for accurate sensors and image quality in software to visualize and analyze pressure data. We started out by developing sensors used to measure pressure on cushions designed to keep wheelchair ►►





► users safe,” explained President Ian Main of the company’s history and evolution.

Building on its foundation of capacitive sensor technology, XSENSOR evolved by listening to the needs of the market and innovating solutions to address its customers’ needs, demonstrating the kinds of things that are possible using pressure sensors and related technology.

XSENSOR specializes in test and measurement, patient mapping and pressure monitoring, mattress retail and design and foot gait and measurement, and its clients include some of the biggest names in aerospace, healthcare, automotive manufacturing, tire manufacturing, food processing, home comfort and beyond.

“Our long standing market verticals include automotive seating and tire design, clinical applications for prevention of pressure injuries on wheelchair cushions, surgical tables, hospital beds, and systems used to fit customers to the right mattress in a retail store,” explained Main.

Innovation at XSENSOR takes place in two ways: existing product improvement and new product development and through this innovation, the company has positioned itself as a respected leader in Canadian healthcare innovation. “The decision to be a leader in our chosen markets has meant XSENSOR choosing to maintain a significant investment in ongoing product development and R&D,” said Main, speaking about the company’s commitment to product development and technological innovation.



“XSENSOR’s R&D team includes diverse expertise in the areas of software, electronics, material science, and physics that contribute to sensor and product performance. Having these resources internal provides the ability to be agile in responding to the needs of current customers and market opportunities,” he said.

In addition to having a breadth of internal resources, XSENSOR further supports its R&D capabilities by partnering with academic institutions, industry groups and other market players that have specialized expertise. With these collaborations, the company can bring new products to market that will have a resounding impact on comfort, safety and performance.

For example, “Recently, we introduced high speed pressure imaging for analyzing surface pressures for applications including occupant safety testing of vehicles and analysis of tire footprint performance at speeds as high as 140 kilometers per hour,” said Main of XSENSOR’s new product offerings.

One of the latest developments at XSENSOR is high speed pressure imaging. The first to market with this kind of technology, it can provide interface pressure information that was not previously available for the evaluation of passive safety devices in vehicles, as well as dynamic tire footprint pressure and evaluation of protective equipment like helmets.

Advancements have also been made in terms of insole and foot sensors at XSENSOR and in the coming months, it will launch a new product that boasts the capabilities to provide accurate, high resolution insole pressure data for athletic performance analysis, clinical gait evaluation, and other related research.

Main also highlighted XSENSOR’s surgical table surface monitoring offering, ForeSite OR. This is a new product that seeks to reduce the risk of tissue damage for patients in long duration surgeries. “Our product is a set of pressure relieving OR [operating room] table cushions with integrated pressure monitoring. The product is a plug and play replacement for existing OR table cushions. The live pressure images help the clinician optimally position and monitor body surface pressure during surgical procedures,” he explained.

A large scale pilot was recently completed using XSENSOR’s ForeSite PT hospital bed pressure monitor that enabled clinical researchers to collect data that will now be analyzed to investigate several research questions. The findings will be published in the coming months.

“Our ForeSite OR system is currently being used in a pilot trial at a leading hospital in California to monitor pressure injury

risk during surgical procedures. Data gathering is underway now and it will take several months to complete. The clinical researchers are looking forward to evaluating the data and providing new insights into pressure injury risk during prolonged surgeries,” explained Main.

Sensors can be used to measure body pressure, speed and impact, and XSENSOR has assembled a team of professionals and subject matter experts who have the knowledge and expertise to develop innovative products that change the course of best practices in the sectors it serves. “Our employees have great technical depth, and we deliver our products through strong and reputable distribution partners,” noted Main. Both its employees and its distributors are important elements of the company’s success.

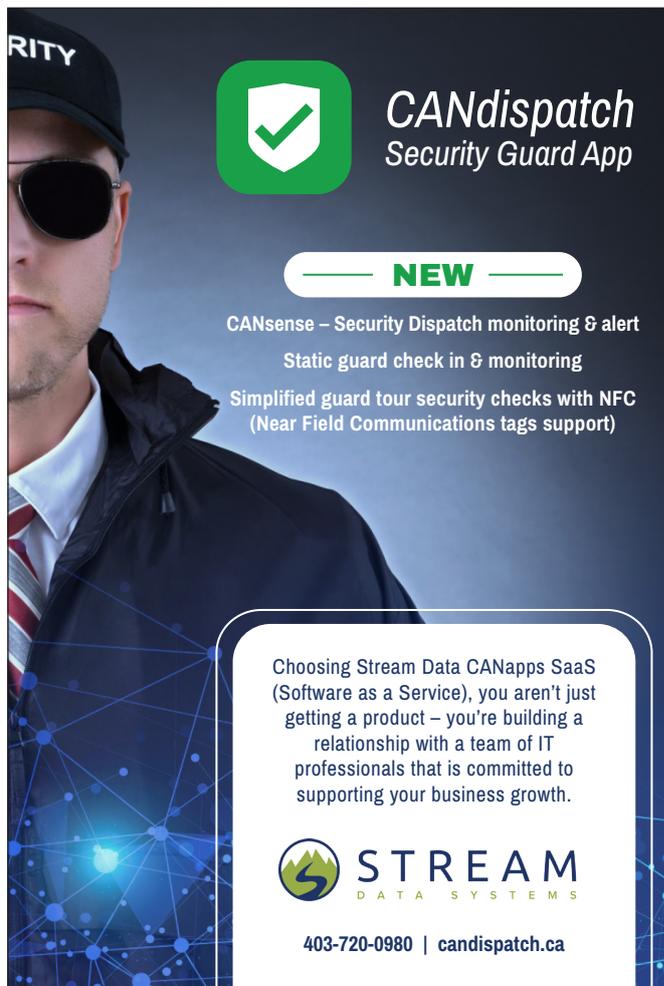
While it is proudly Canadian-based, XSENSOR has a global reach. Its products are used in over 50 countries and its name is regarded far and wide. Distribution partners are located across Europe, the Asia-Pacific region and South America.

Of course, quality is paramount to XSENSOR and its customers. It is ISO/IEC 17025 certified, the standard used by testing and calibration labs; some of its products are IEC60601-1 certified for direct patient contact in medical applications; and it is a Health Canada and U.S. FDA registered manufacturing site, in compliance with Good Manufacturing Processes. “Our quality system is designed to ensure the ongoing performance and reliability of our sensors once they are in the hands of our customers. Our processes and testing make certain the sensors meet design specifications,” Main explained.

In the industries it serves, quality is critical. From patient safety and comfort to the critical nature of the design and function of ultrafast sensors for things like airbag pressure capture, the significance of XSENSOR’s contributions cannot be overlooked.

XSENSOR is a leader because of its commitment to quality, its investment in technology and its ability to align itself with some of the best companies and organizations in the world. Further to these qualities, its products make a difference. “Our medical products have real benefit to improving quality of life and reducing the possibility of tissue damage for those at risk. Our industrial products contribute to product performance and safety,” said Main.

“The company’s products are used in over 50 countries and its name is regarded far and wide.”



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As XSENSOR continues to innovate and grow, it seeks to identify new market opportunities where it can be impactful. Given that sensors are present across markets beyond medical devices, automotive and mattress retail, there are great opportunities to utilize its pressure imaging technology in new applications.

As the company looks forward, the goal will be to, as Main stated, “develop and own the markets for our new products. We do this by working closely with key customers, both listening to and incorporating their feedback and testing features we’ve implemented by anticipating future needs/use cases.”

Drawing on XSENSOR’s comprehensive product roadmap, the team will continue to focus on innovation, designing and manufacturing more intelligent and connected surfaces. Its future products are IoT (Internet of Things) ready and will further improve safety, comfort and performance, as well as the company’s reputation as a leader and a change-maker.

To see what’s new at XSENSOR Technology Corporation or to learn more about pressure measurement technology and the various products in its portfolio, visit the company’s new and updated website: www.xsensor.com ■

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