



MicroStrain

Corporate Capabilities



 **MicroStrain**[®]
Micro Sensors. Big Ideas.[™]



Our Mission

MicroStrain..

... to produce embedded wireless sensing systems for the next generation of smart machines and structures.





Our Vision

MicroStrain will ...

- ... produce smart, reliable and easy to install sensing systems
- ... eliminate costly wiring
- ... eliminate battery replacement
- ... record and report on machine health and structural fatigue
- ... deliver reports without human intervention

Our Values

MicroStrain focuses on strategies, plans and actions that serve the best interests of our customers.

We maintain a diverse team of highly trained, talented individuals.

We foster an environment of innovation, creativity, agility and excellence.

We produce quality products that exceed customer expectations at a reasonable price.

We operate in accordance with the highest standards in all relationships with customers, suppliers, and the community.

Core Competencies

MicroStrain's core competencies are in the creative combination of sensors, embedded processors, and wireless communications.

Our energy harvesting systems and power management software enables sensor networks that never require battery maintenance.



Sensors for Biomechanics
Wireless sensors measuring strain, position and motion



Products

MicroStrain’s sensors are used to test structural designs, to control manufacturing processes, and to extend the operating life of machines and structures.

We often work closely with our customers to provide a custom solution to meet their specific needs.

Prior to shipping, every sensor is carefully tested by automated robots to ensure product performance and reliability.



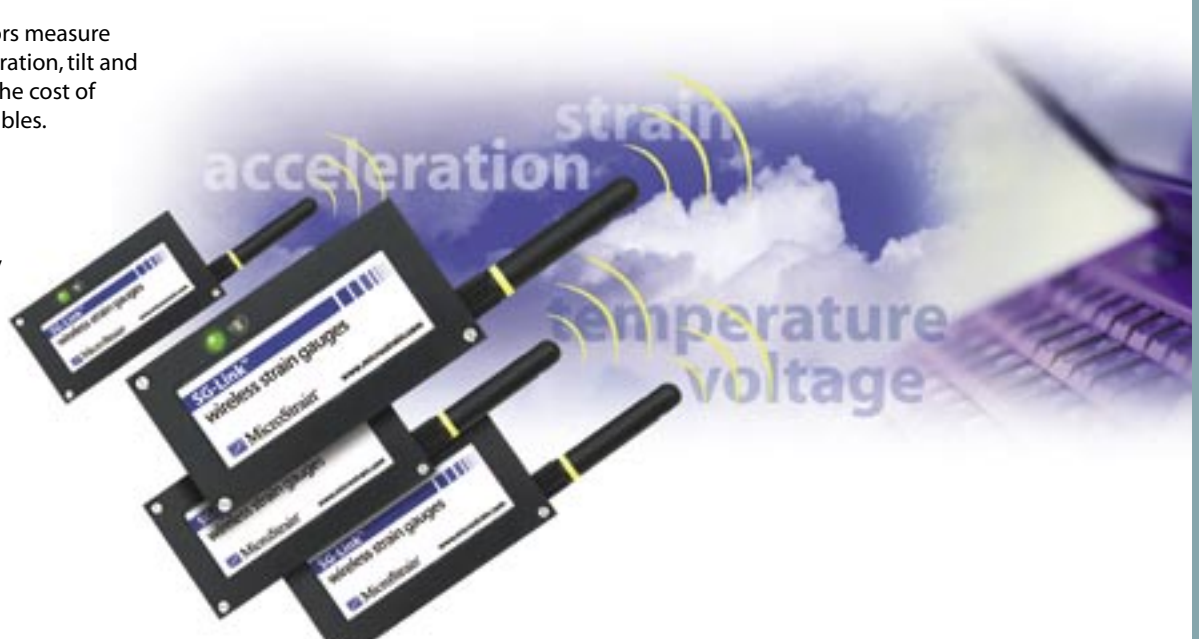
Wireless Sensors for Automobiles
Measure strain, torque, displacement, temperature, acceleration and orientation

Wireless Sensor Networks

MicroStrain's wireless sensors measure strain, pressure, load, acceleration, tilt and displacement, eliminating the cost of installing and protecting cables.

Applications:

- Test and measurement
- Condition based monitoring of machinery
- Health monitoring of structures

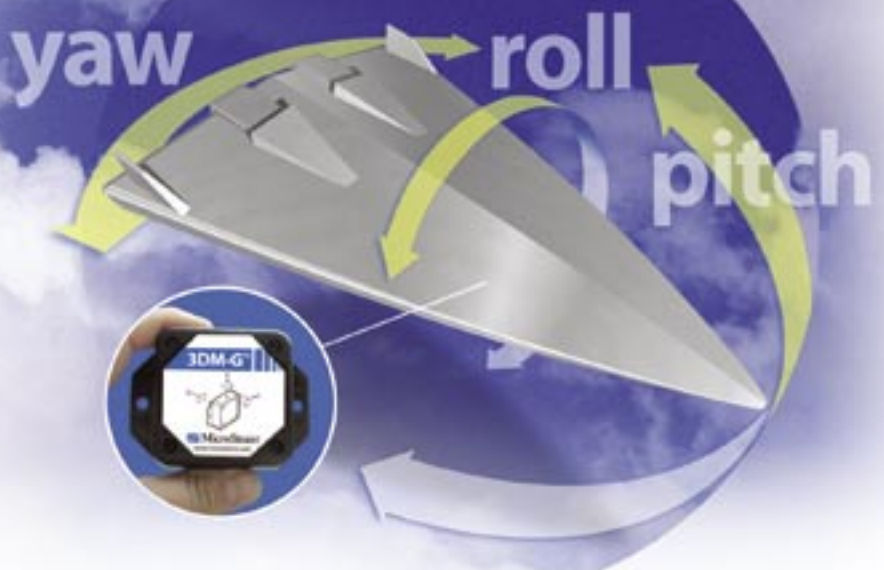


Orientation Sensors

Combining micro-sensors, robotic calibration, and embedded software algorithms; MicroStrain's orientation sensors are small, lightweight, and fully temperature compensated.

Applications:

- Navigation and control for unmanned systems
- Platform stabilization
- Antenna pointing
- Head tracking

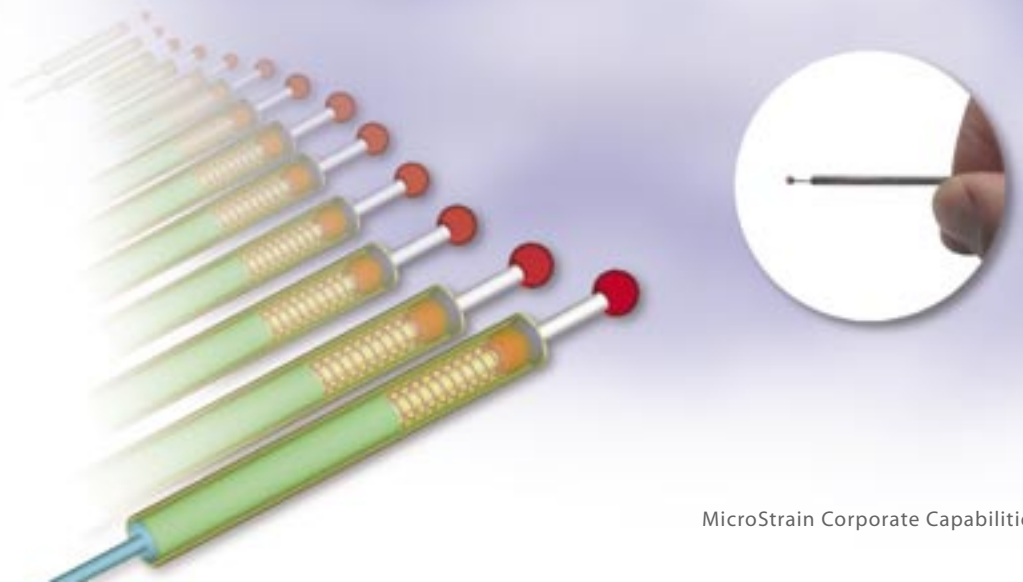


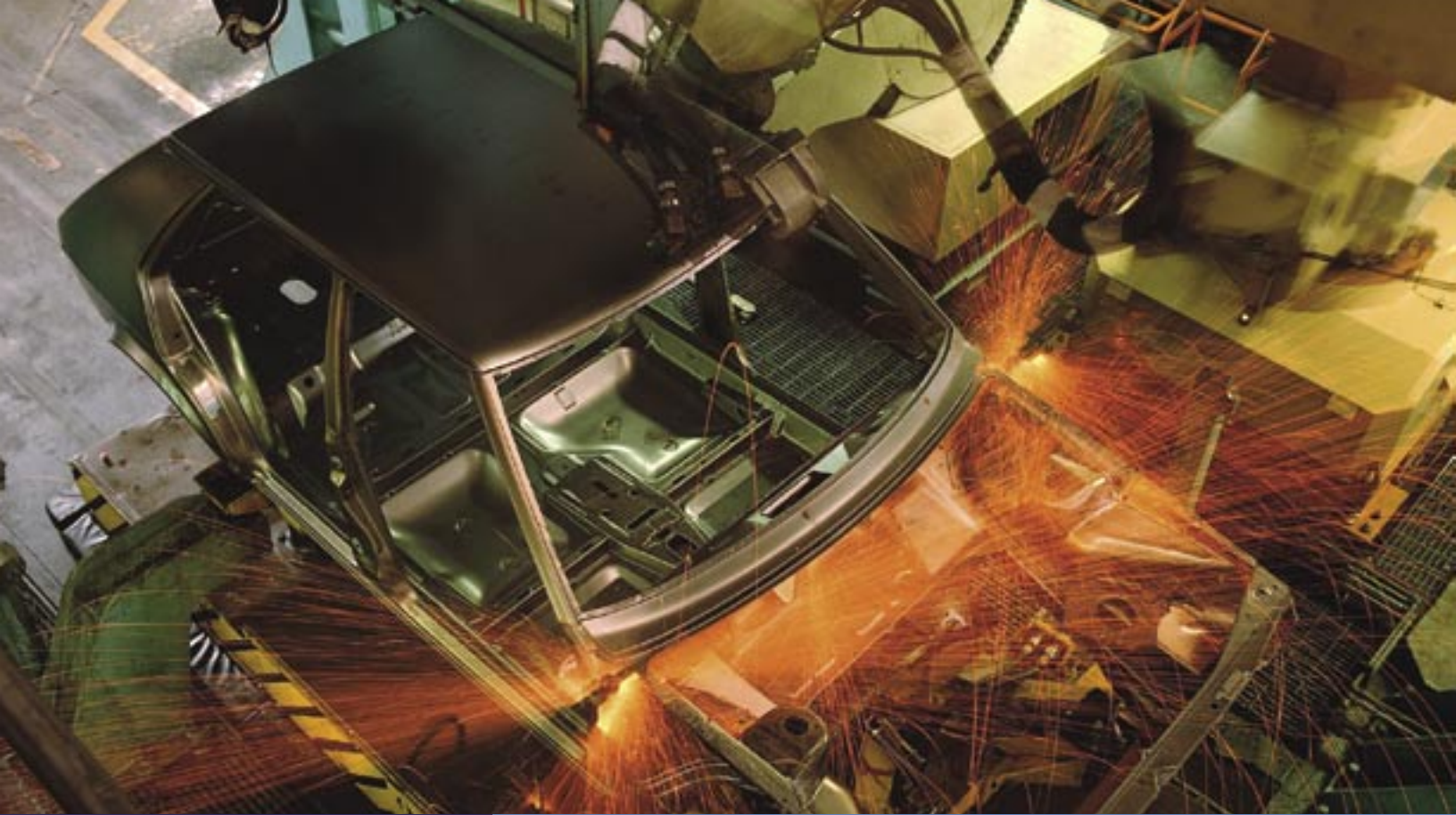
Micro-Miniature Linear Displacement Sensors

MicroStrain's DVRT displacement sensors deliver a fast (1 KHz) response, and they are capable of withstanding harsh environments, such as immersion in saline and hot pressurized oil (200°C, 7000 psi).

Applications:

- Test and measurement
- Engine controls
- Robotics, automated machines





Markets and Customers

MicroStrain's products are used in a wide variety of applications in the automotive, aerospace, industrial manufacturing, semiconductor, environmental monitoring, oil & gas, power generation, civil structures and defense markets.

Major customers include:

- Caterpillar
- Motorola
- Johnson & Johnson
- General Electric
- Pratt & Whitney
- NASA
- US Navy
- US Army





Profile

“The aerospace and automotive industry found our sensing systems met their requirements and we’ve worked on many groundbreaking projects.”

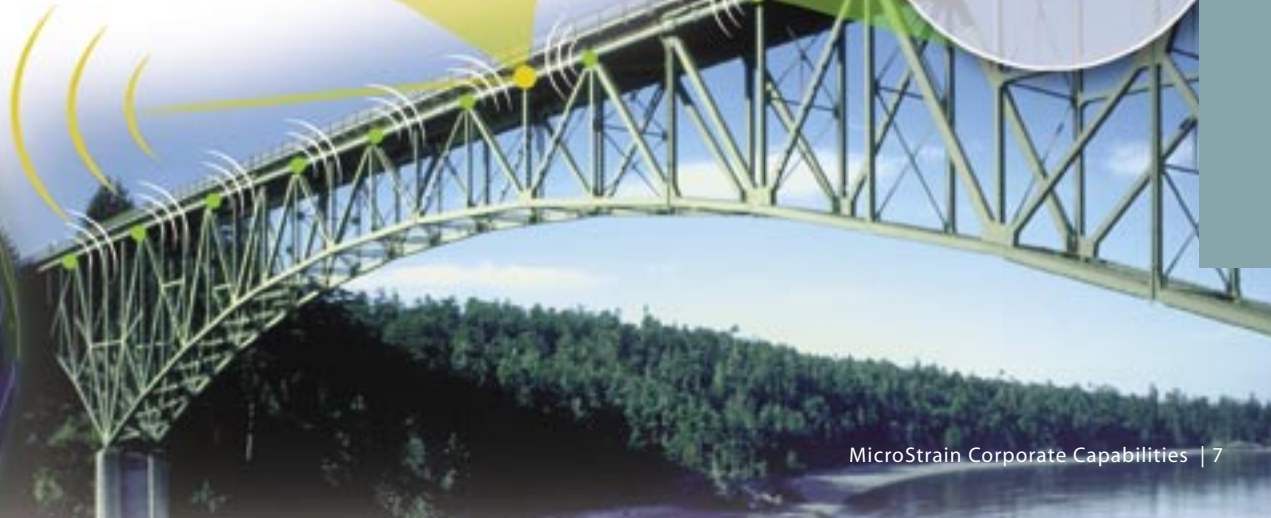
MicroStrain, Inc. is a privately held corporation based in Williston, Vermont. Our first strain sensors were designed for arthroscopic implantation within human knee ligaments – a measurement which had never before been accomplished.

Over time, the aerospace and automotive industry found that our sensors met their requirements and we’ve worked on many groundbreaking projects.

As our customer base expanded, we began to fuse multiple sensors with advanced micro controllers to enhance system performance. We added wireless capability to enable networks of digital sensors to send their data to the internet.

Our orientation sensors were initially developed as controllers to help to reanimate the limbs of paralyzed individuals. The tiny, lightweight gyro enhanced orientation modules that resulted from this effort found immediate acceptance for navigation and control of unmanned systems.

Sensors are literally changing our world; we’re inspired to work with our customers to enable the next generation of smarter and safer implants, machines and structures.



Personnel

“*MicroStrain has developed a large portfolio of intellectual property that can be brought to bear on new projects, resulting in significant reductions in development time and cost.*”

MicroStrain's unique mix of mechanical and electrical engineering expertise is critical for success in the sensors industry, because sensors are, in essence, electromechanical systems.

Mr. Steven Arms, MSME, the founder and President, has 20 years experience designing and developing micro-sensors for difficult measurement applications.

Mr. Christopher Townsend, BSEE, the Executive Vice President of Engineering, has worked for MicroStrain for the last 15 years, and has led the firm's embedded systems development.

Dr. David Churchill, the Director of Research, has been largely responsible for the development of our advanced, fully automated robotics test, calibration, and burn-in systems which are used to validate and document the performance of every sensor shipped to the customer.

MicroStrain has a full compliment of engineers, support and production staff, specializing in wireless communications, robotics, physics, electronics, software and mechanical design.

Core Advantage

MicroStrain is recognized as one of the world's leading suppliers of smart sensors.

Our development team specializes in sensing, embedded software, robotic test, and micro-power management.

We gain our competitive advantage through embedded software and on-board intelligence, which allows us to deliver superior performance using economical MEMS sensors.

We've developed a large portfolio of intellectual property that can be brought to bear on new projects, resulting in significant reductions in development time and cost. Our patents embrace emerging and vital new technologies, including wireless sensor networks and energy harvesting.

We are experienced at partnering with our customers to produce custom sensors on time and within budget.

Strong supply chain production alliances allow us to respond quickly to sudden increases in demand.

For more information, please contact:



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Sensors Expo Spring 2004
Category: Data Acquisition Components
Agile-Link™ Wireless Data Acquisition System



Sensors Expo Spring 2003
Category: Data Acquisition Components
EmbedSense Wireless Sensors



Sensors Expo Spring 2002
Category: Sensor Components
Microminiature Gauging DVRT Position Sensor



Sensors Expo Spring 2002
Category: Sensors
3DM-G Orientation Sensor



Sensors Expo Spring 2001
Category: Sensors
Wireless Web Sensor Network



Sensors Expo Fall 2001
Category: Sensors
FAS-G Inclinometer



Sensors Expo Spring 2001
Category: Data Acquisition
Micro Datalogging Transceiver



Vermont Department of Economic Development
Innovator of the Year



Sensors Expo Fall 2001
Category: Data Acquisition
StrainLink Multichannel Transceiver



1998 Tibbetts Award
Small Business Administration