

# Sensor Products

## Fact Sheet

### Overview

For more than thirty years, Freescale Semiconductor's sensor products have helped make the world a safer and more interactive place with continuous sensor innovation. Globally, we have delivered more than 1 billion micro-electromechanical systems (MEMS)-based and CMOS state-machine based proximity sensors. Building on our heritage of innovation, we continue to expand our sensor portfolio—supporting our customers' development of smarter and more efficient electronic solutions.

Freescale is a leading provider of acceleration, pressure and proximity sensors for the appliance, automotive, consumer, industrial and medical markets. The sensor ICs complement Freescale's broad portfolio of ZigBee® technology, microcontrollers, microprocessors, digital signal processors, analog and power ICs and development tools, offering our customers innovative system solutions.



### Appliance/Consumer

- Appliance balancing and monitoring
- Appliance control panels
- Black boxes/event recorders
- Smart portable electronics
- Camcorder stability
- Hard disk drive protection
- Weather stations
- Anti-theft devices
- Vacuum cleaners
- Refrigeration frost sensing
- Fall logs
- Fall detection
- Tilt controls
- Touch screens
- Vibration monitoring

### Health Care Monitoring

- Blood pressure (BP) monitors
- Invasive BP monitors
- Intrauterine BP monitors
- Hospital bed controls
- Respirators
- Sleep apnea monitors
- Sports diagnostic systems
- Dialysis equipment
- Drug delivery for inhalers
- Physical therapy

### Industrial

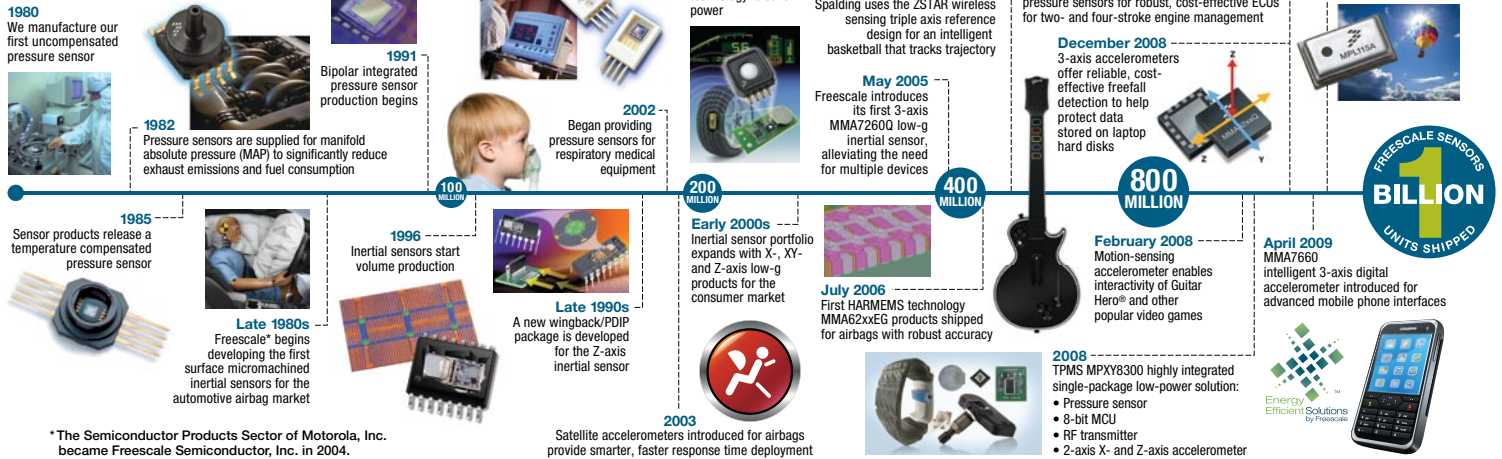
- Process control
- Flow control and measurement
- HVAC systems
- Building airflow control
- Factory automation
- Boiler pressure indicators
- Liquid level measurements
- Seismic monitors
- Smart motor maintenance
- Robotics
- Motion control

### Automotive

- Tire pressure monitoring systems
- Fuel level sensing
- Airbags
- Brake boosters
- Electronic stability control
- Manifold absolute pressure
- Barometric absolute pressure
- Seat controls
- Occupant detection and safety
- Airflow indicators
- Trailer brake controls
- Vehicle navigation
- Backup GPS

## One Billion and Counting

From 1980 to 2009 Freescale has designed, produced and shipped innovative sensor products to global customers



Creating new technologies that can sense and interact with the systems around them are becoming essential to the way we live, work and play. With designers facing new challenges to create smarter products, Freescale's sensor products are dedicated to meeting the needs of this constantly evolving and expanding market.

Today's Freescale sensors include acceleration, pressure and proximity capacitive touch sensors. The acceleration family has expanded from the high g ranges to include the low g ranges, making the total range of availability from 1.5g to 250g.

This portfolio expansion benefits those products requiring sensors that can detect small changes in force resulting from fall, tilt, motion, positioning, shock or vibration.

The pressure family has expanded package options that are very small and offer a variety of porting configurations. One of the most robust port options features a longer vertical length, as well as a wider diameter which is perfect for ensuring the tube covers the port adequately and stays in place. The pressure sensor portfolio also has solutions that measure over pressure or under pressure to ensure your application has positive and negative pressure readings where needed.

The proximity capacitive touch sensors measure the presence or absence of objects in a three-dimensional electric field. These sensors feature adjustable frequency and a shield driver for driving remote electrodes through coaxial cables. The proximity sensing ICs are designed for budget-minded touch, proximity and liquid level sensing.

No matter which Freescale sensor product family you choose, our commitment is to work closely with you to ensure that the products in our portfolio meet your most challenging sensor applications.

Smaller is better when it comes to our packaging. We are committed to package development that addresses your unique needs. This cutting-edge, smaller packaging is developed without compromising the design, function or manufacturability of your application. Diverse package porting and mounting options are available to fit your products. Numerous package porting options are available to fit your products. Freescale sensors packaging technology provides a cost-effective solution for your specific products.

One of Freescale's principle objectives is to meet your market needs. We listen to you and turn your requests into products. Our core competency is new product development using processes in place to shorten the development cycle time. Our goal is to design products that ensure your customer satisfaction and provide value the first time, every time.

Freescale sensors are also able to leverage complementary technologies from the corporation to strengthen your global competitiveness in the expanding marketplace. Freescale's sensor products are where customer support and future direction work in tandem. As we work with you to meet your rapidly changing needs for small, cost-effective sensors, our technology is continuously expanding and evolving.

You can count on our sensors to detect, monitor and provide real-time feedback in your application environment. Contact us to learn what we can do for you.

### Learn More:

For current information about Freescale products and documentation, please visit [www.freescale.com/sensors](http://www.freescale.com/sensors).