2008 MicroElectroMechanical Systems (MEMS)

Sensors and Actuators Markets – Worldwide

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Abstract

Industry is turning quickly to semiconductor solutions with moving parts. Such devices have historically played an important role in the industrial and automotive market, but today these products are penetrating other market segments where they are finding a home in computers, mobile phones, and other consumer electronics. The most recognized applications are the Nintendo Wii and Apple's iPhone. The MEMS segment is poised to reach $15 billion by 2013.

MEMS devices have been around for quite a while. Over a decade ago, suppliers were creating products that combine silicon architecture with sensors which were used (and still used) in air bag modules, inkjet printer cartridges, security systems, and scanners. Today, the market opportunity for MEMS is growing exponentially. Along with the Wii and iPhone, the other recognized applications for MEMs are DLP televisions, air bag modules, tire pressure sensors, microphones used in laptops and mobile phones, inkjet printers, and digital cameras.

MEMS devices are a grouping of several products on the market today: pressure sensors, accelerometers, switches (used for optical switching and digital imaging), and other unique products including miniaturized microphones and microscopic medical devices used for imaging and therapy. Databeans estimates that the current total available market (TAM) for MEMS devices reached $7 billion in 2007 and will expand to $7.7 billion for this year. The mature segment for accelerometers maintains the majority share, but fast growing demand for optical products and other promising new technologies, such as MEMS-based oscillators and replacement of other quartz based devices, will quickly steal share away over the next five years.

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