RESEARCH BULLETIN

IC Insights

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Sensor Sales Stay Strong Due to Biggest ASP Rise in Two Decades

Tight supplies of devices in automotive, industrial, and embedded-control applications drive up prices, causing double-digit percentage revenue growth in most sensor categories, says update report.

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Fueled by the spread of "smart" embedded controls and higher selling prices due to tight supplies in the market, semiconductor sensor sales are forecast to continue to register double-digit percentage growth in 2022 compared to last year, says IC Insights' upcoming November *4Q22 Update* of *The McClean Report* service. However, weakening economic conditions and high inflation rates around the world have slowed sensor unit demand in consumer electronics, personal computers, and mainstream smartphone segments since the start of summer.

Sensor unit shipments are forecast to grow just 1% in 2022, but will nudge up to a record-high 30.8 billion devices compared to 30.4 billion in 2021. Total sensor sales in the fourth quarter were on an annual pace to grow 13% in 2022 to an all-time high of $14.4 billion from $12.7 billion last year, according to IC Insights' *4Q22 Update* forecast (Figure 1).

Tight supplies and shortages of sensors for automotive systems, industrial equipment, and other embedded-control applications have significantly increased the average selling price (ASP) of these semiconductors. IC Insights expects the 2022 ASP for total sensors will be 11% higher than in 2021, representing the largest one-year price percentage increase in more than two decades. Sales in two major sensor categories are expected to finish this year with double-digit percentage increases: +15% for acceleration/yaw sensors; and +20% for magnetic-field sensors (including electronic compass chips often found in navigation applications). Meanwhile, sales of pressure sensing devices (including microphone chips) are forecast to only grow 5% in 2022 due to constraints in automotive production and a drop off in smartphone shipments this year.

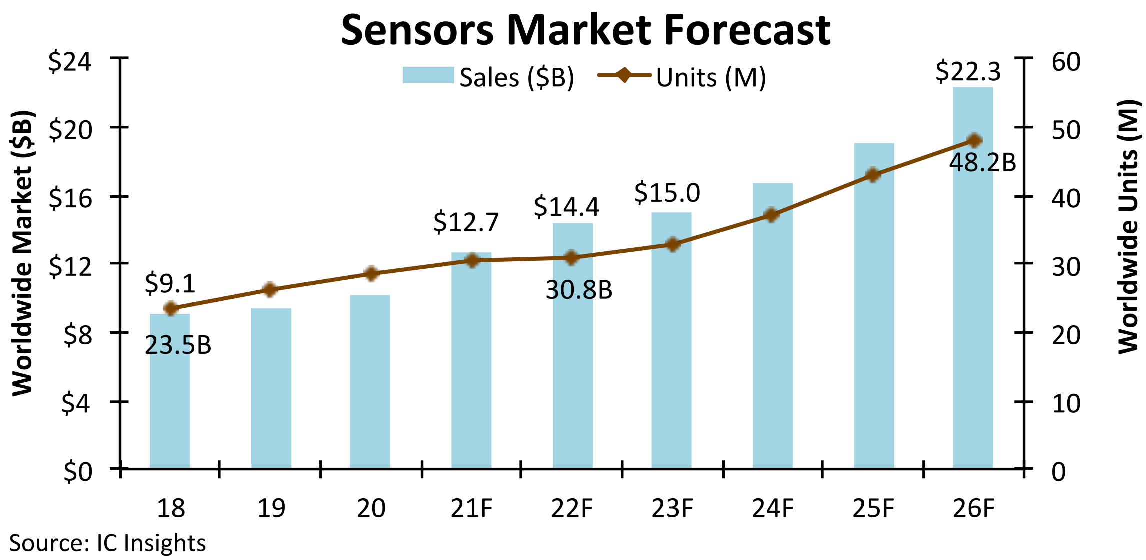

Figure 1

Pressure sensor sales are projected to increase to $4.8 billion this year with shipments rising just 0.4% to 8.5 billion units. Revenues in the acceleration/yaw category, which contain accelerometers and gyroscope designs for inertial sensing, are expected to reach $5.5 billion in 2022 with unit shipments rising a little less than 0.5% to 7.1 billion this year. *The McClean Report's 4Q Update* also shows magnetic-field sensor sales hitting $3.3 in 2022 with unit shipments growing 1% to 12.7 billion.

Nearly three quarters of annual semiconductor sensor sales are generated by products made with microelectromechanical systems (MEMS) technology. Tiny MEMS structures, in built silicon, detect and measure changes in pressure sensors, microphone chips, and acceleration/yaw sensors. MEMS-based devices now account for 54% of total sensor unit shipments worldwide. Sales of sensors containing MEMS technology are expected to grow 5% this year to a record-high $10.8 billion while shipments of these devices are projected to increase 7% to an all-time annual peak of 16.7 billion in 2022.

Report Details: *The 2023 McClean Report*

The 2023 edition of *The McClean Report—A Complete Analysis and Forecast of the Semiconductor Industry,* will be released in January 2023. A subscription to *The McClean Report* service includes the January *Semiconductor Industry Flash Report*, which provides clients with an initial overview and forecast of the semiconductor industry for 2023 through 2027. In addition to the January *Semiconductor Industry Flash Report*, *Quarterly Updates* to the report will be released in February, May, August, and November of 2023.

Beginning with the 2023 edition of *The McClean Report*, all renewals and new orders must be placed through TechInsights. To subscribe or receive additional information about TechInsights' new and existing products and services please contact: support@techinsights.com

About IC Insights

IC Insights, Inc., based in Scottsdale, Arizona USA, is dedicated to providing high-quality, cost-effective market research for the semiconductor industry. Founded in 1997, IC Insights offers coverage of global economic trends, the semiconductor market forecast, capital spending and fab capacity trends, product market details, and technology trends, as well as complete IC company profiles and evaluations of end-use applications driving demand for ICs.

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