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CMOS Image Sensors Will Regain Strength After Slowing in 2020

Economic recovery from the fallout of the Covid-19 pandemic, new 5G smartphones, machine vision, and more embedded cameras will drive up CMOS image sensor sales to record high levels through 2025, says new O-S-D report.

The high-flying market for CMOS image sensors hit a speed bump in 2020 with the global outbreak of the Covid-19 virus crisis significantly cutting sales growth in this large optoelectronics product category to 3% last year compared to an annual average of nearly 16% since 2010, according to IC Insights' new 2021 O-S-D Report—A Market Analysis and Forecast for Optoelectronics, Sensors/Actuators, and Discretes.

The new 350-page O-S-D Report forecasts that CMOS image sensor revenues will regain strong high-growth momentum in 2021, climbing 19% to \$22.8 billion, which will be a 10th consecutive record-high level for worldwide sales since 2010 (Figure 1).

MORE INFORMATION CONTACT

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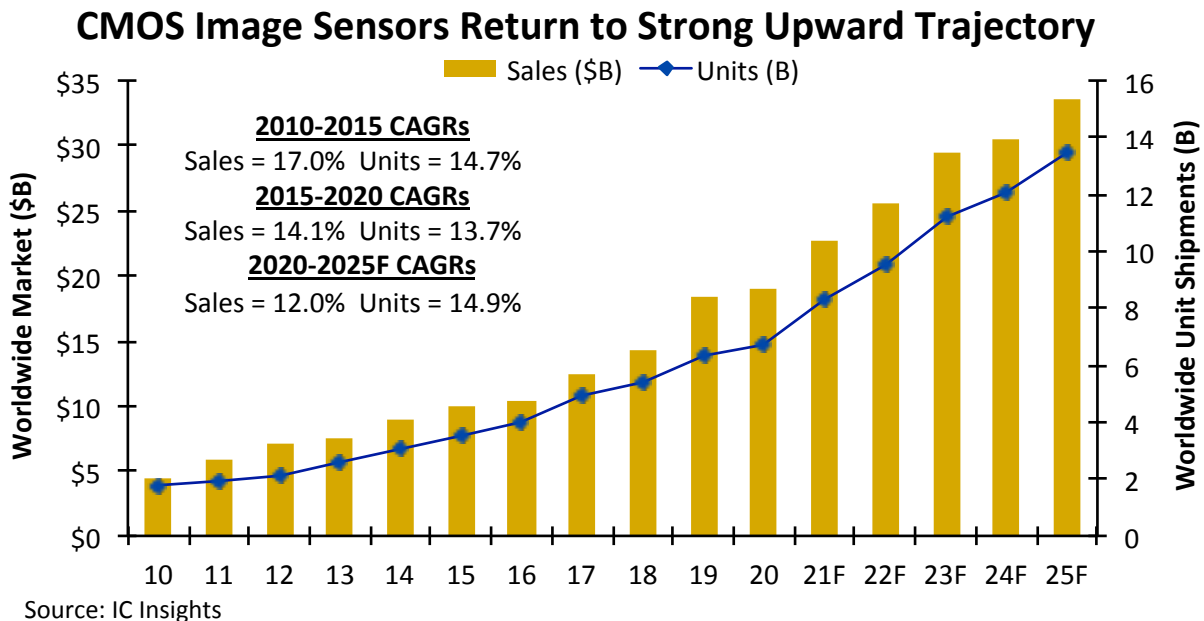


Figure 1

When the Covid-19 virus pandemic accelerated in the first half of 2020, businesses, schools, travel, and most public activities were shut down worldwide, causing a nosedive in CMOS image sensor applications—including smartphones, automobiles, and a wide range of embedded cameras, which are increasingly used

in commercial and industrial systems. When the Covid-19 virus crisis deepened in 2Q20, image sensor market giant Sony warned that its business was deteriorating, mainly because of a falloff in smartphone shipments worldwide. However, demand began to improve in 3Q20, and by the end of 2020, Sony's CMOS image sensor sales had registered a minuscule 0.3% increase to nearly \$8.3 billion for the entire year. It ended up that 2020 was Sony's worst year for image sensor growth since it began emphasizing CMOS technology over CCDs in 2006.

With the global economy expected to regain momentum in 2021 and more digital cameras being designed into systems—including new 5G smartphones and machine-vision applications, sales of CMOS image sensors are projected to increase by a compound annual growth rate (CAGR) of 12.0% during the *O-S-D Report's* five-year forecast period, reaching \$33.6 billion in 2025. Total shipments of CMOS image sensors are forecast to grow by a CAGR of 14.9% to 13.5 billion units in 2025 compared to 6.7 billion in 2020.

The new *2021 O-S-D Report* shows automotive systems being the fastest growing application for CMOS image sensors in the next five years, with sales rising by CAGR of 33.8% to reach \$5.1 billion in 2025. After that, the highest sales growth rates in the five-year forecast are: medical and scientific systems (a CAGR of 26.4% to \$1.8 billion); security (a CAGR of 23.2% to \$3.2 billion); and industrial, including robots and the Internet of Things (a CAGR of 21.8% to \$3.5 billion). CMOS image sensor sales for cellphones—the largest end-use application—are forecast to grow by a CAGR of 6.3% to \$15.7 billion in 2025, or about 47% of the market total versus 61% in 2020 (\$11.6 billion).

Report Details: *The 2021 O-S-D Report*

In a one-of-a-kind study, IC Insights continues to expand its coverage of the semiconductor industry with detailed analysis of trends and growth rates in the optoelectronics, sensors/actuators, and discrete market segments in its newly revised 350-page *O-S-D Report—A Market Analysis and Forecast for the Optoelectronics, Sensors/Actuators, and Discretes*.

Now in its 16th annual edition, the *2021 O-S-D Report* contains a detailed forecast of sales, unit shipments, and selling prices for more than 40 individual product types and categories through 2025. Also included is a review of technology trends for each of the segments. The *2021 O-S-D Report*, with more than **240 charts and figures**, is attractively priced at **\$4,190** for an individual-user license (**\$995** for each additional user) and **\$7,290** for a multi-user corporate license.

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