

Omnivision unveils 12-megapixel CMOS sensor for automotive safety at AutoSens Europe 2024

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The company introduced the OX12A10 with TheiaCel technology, aimed at enhancing ADAS and autonomous driving with superior resolution and lighting adaptability

In a press release on Oct. 3, Omnivision introduced its latest product, the OX12A10 12-megapixel (MP) complementary metal-oxide semiconductor (CMOS) image sensor, at AutoSens Europe 2024 in Barcelona, Spain. The new sensor, featuring TheiaCel technology, is designed to enhance automotive safety by offering superior resolution and image quality under any lighting condition, making it especially suitable for front machine vision cameras used in advanced driver assistance systems and autonomous driving.



Source: Marin Tomas/Stock Photos via Getty Images

The OX12A10 stands out as the highest-resolution sensor within Omnivision's TheiaCel product family, which also includes the 8-MP OX08D10 and 5-MP OX05D10 devices. This family leverages lateral overflow integration capacitors (LOFIC) and Omnivision's proprietary DCG high-dynamic range (HDR) technology, aimed at eliminating LED flicker and achieving a broad dynamic range, surpassing previous automotive HDR solutions.

The OX12A10, which has a 1.43-inch optical format, is notable for being the first sensor to utilize Omnivision's a-CSP+ package technology, allowing for a significantly smaller footprint compared to traditional ball grid array packages. The sensor is currently available for sampling and is expected to enter mass production in the third quarter of 2025.

CONTACTS

The Americas

+1 877 863 1306

Europe, Middle East & Africa

+44 20 7176 1234

Asia-Pacific

+852 2533 3565

www.spglobal.com/mobility

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