Sony Semiconductor Solutions to Release 4K Image Sensor for Security Cameras with the Industryâ??s Smallest 1.45 Âµm LOFIC Pixels

Descrizione

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Contributing to improved recognition precision with high image quality in high-contrast environments and dark scenes

ATSUGI, Japan, March 17, 2026 /PRNewswire/ â?? Sony Semiconductor Solutions Corporation (Sony) today announced the upcoming release of the IMX908, a 4K CMOS image sensor for security cameras with the industryâ??s smallest*1 1.45 Âµm LOFIC*2 pixels.

The new sensor uses the newly developed LOFIC pixels to achieve 96 dB high dynamic range imaging at 4K resolution with a single exposure. Building on this, improved low-light performance delivers high-quality imaging with reduced highlight blowout, loss of shadow detail, and noise in both high contrast environments and dark locations compared to conventional products.

The new sensor will expand SSSâ??s lineup of products with both high-resolution and high dynamic range for security camera applications, which require high-precision image recognition in a wide range of indoor and outdoor environments, thereby contributing to a safer and more secure society.

Main Features

â? Compact design and 4K resolution thanks to the industryâ??s smallest*1 1.45 Âµm LOFIC pixels

The new sensor is equipped with newly developed LOFIC pixels. The LOFIC structure offers more efficient charge accumulation and voltage conversion than conventional products, contributing to increased sensor saturation charge and improved low-light performance. The structure also enables the industryâ??s smallest*1 1.45 Âµm single pixels, delivering 4K resolution imaging on a compact 1/2.8-type sensor.

â? High image quality in high-contrast environments and dark locations made possible by a high dynamic range of 96 dB

By expanding the amount of saturated charge to nearly 20x that of conventional products,*4 the new sensor can accumulate more charge, enabling reduced highlight blowout when shooting under strong light sources. It can also convert voltage from less light, with an approximately 27% improvement in low-light performance*5 compared to conventional, *4 reducing loss of shadow details and suppressing noise when shooting in dark locations. These improvements expand the single exposure dynamic range to 96 dB, enabling high-quality and high-sensitivity imaging even in high-contrast and dark environments.

â? High-definition imaging with fewer artifacts thanks to the single exposure method

The new sensor achieves a high dynamic range with the single exposure method. Unlike the multiple exposure method, which composites multiple images captured at different exposure settings, the single exposure method reduces artifacts and supports highâ??speed output. This results in stable, high-definition imaging with less outline and color shifting, which tend to hinder AI image recognition, thereby contributing to improved recognition accuracy, even of moving subjects. This product can also support output image data generated with different conversion efficiency levels, offering more flexible options in camera design.

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Related Links

IMX908 product pagehttps://www.sony-semicon.com/en/products/is/security/security/IMX908.html

Sony security camera image sensor technology STARVISâ?¢ informationhttps://www.sony-semicon.com/en/technology/security/index.html

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Data di creazione
Marzo 17, 2026
Autore
redazione

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