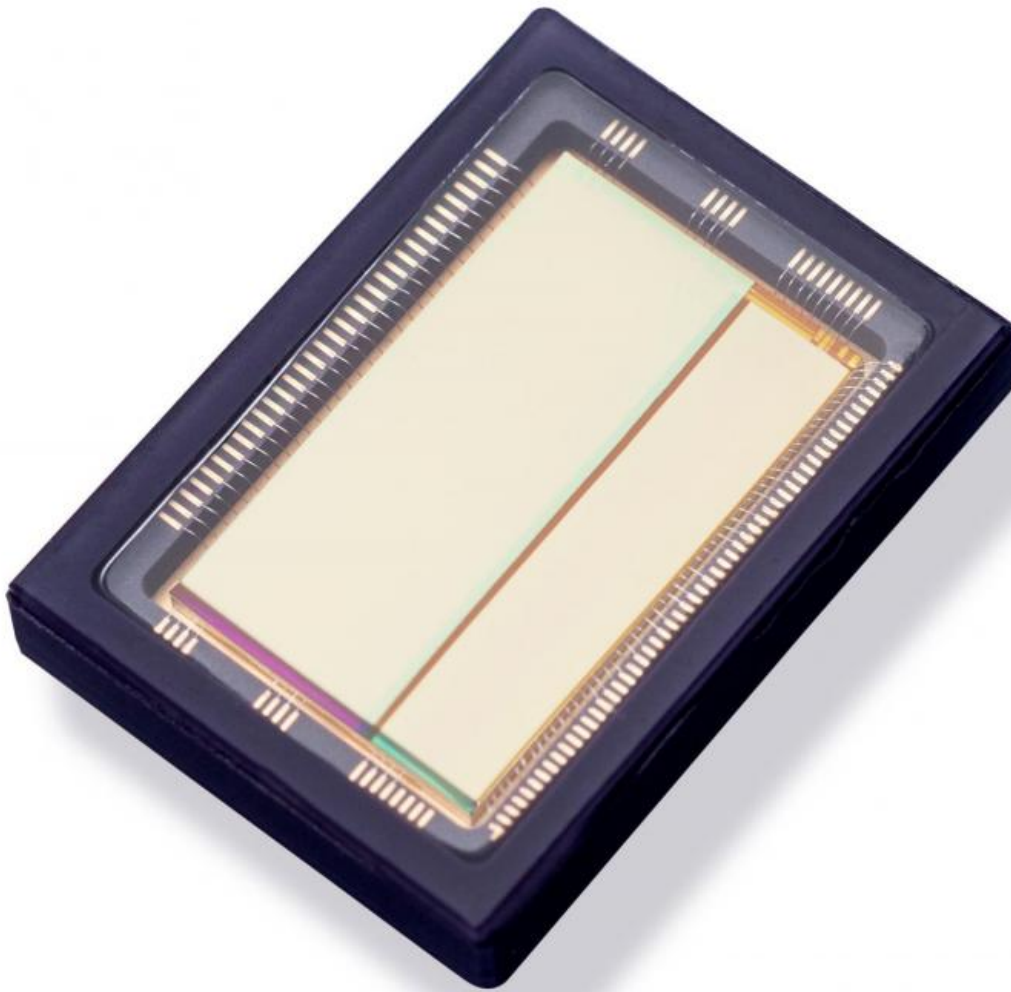


Imec introduces broad spectrum hyperspectral imaging solutions

February 15 2016, by Hanne Degans



At this week's SPIE Photonics West, imec will present a new set of hyperspectral sensor and camera solutions with extended spectral range, going from the visible light (VIS) up to near infrared (NIR). The new line-scan VNIR (visible to near-infrared) sensor and snapshot mosaic VNIR camera outperform current solutions in spectral range and compactness.

Example applications for the line-scan sensor are machine vision and remote sensing applications, e .g. precision agriculture using UAVs and satellites. It features 140+bands in the 470-900nm range. Its small form factor is the result of extreme integration of the hyperspectral filter onto the CMOS sensor.

"Leveraging our learnings from previous versions of our line-scan hyperspectral sensor, we developed a new process that enabled us to deposit spectral filter banks in both the visible and near infra-red range on the same CMOS sensor. This achievement extends our sensing solutions within medical, precision agriculture, remote sensing and industrial applications;" explains Andy Lambrechts, Program manager integrated vision solutions at [imec](https://www.imec.com).

Imec's 450-875nm snapshot dual-sensor camera targets applications where dynamic effects are imaged: especially medical, machine vision and security surveillance. By integrating, within one single unified dual-sensor camera architecture, a 16-bands 4x4 mosaic sensor covering the 450-600nm range together with a 25-bands 5x5 mosaic sensor covering the 600-875nm range, imec realized a solution that covers a broad spectral range from visible to near-infrared while maintaining high spatial and spectral resolution tradeoffs.

"Working closely with two of our camera partners, VRmagic and Cubert GmbH, we have realized one of the most advanced snapshot hyperspectral imaging cameras. It captures 40+ bands ranging from

450-875 m, at video-rate speed acquisition. This achievement clearly sets a new milestone for the real-time snapshot hyperspectral imaging camera market;" explains Jerome Baron, Business development manager integrated imaging at imec.

Imec's new line-scan (visible to near infrared) VNIR sensor and snapshot mosaic VNIR [camera](#) will be demonstrated at Booth 4144 at SPIE Photonic West exhibition and will be available for early sampling to strategic partners from April 2016.

Provided by IMEC

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