

Press Release

Spectricity Deploys Proprietary Technology at X-FAB to Bring Spectral Imaging to Mobile Devices

Enabling integration of small, pixelated spectral filters on CMOS image sensors

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X-FAB Silicon Foundries SE, the leading analog/mixed-signal and specialty foundry, and Spectricity, a fabless semiconductor company specializing in the development of multispectral imaging technology have collaborated on a unique imaging solution. Proprietary spectral imaging technology from Spectricity has been installed at X-FAB's high-volume manufacturing facilities. This will, for the first time, enable low-cost manufacturing of spectral image sensors for use in mobile devices.

Spectricity's patented spectral sensor solution is based on the integration of small, pixelated spectral filters onto CMOS image sensors in the visible and NIR spectral range. Inclusion of 16 or more high-quality narrowband channels is possible. Through its deployment, X-FAB is the only foundry enabling volume CMOS production of such small spectral pixels, making it and Spectricity well positioned to meet the demands of the mobile handset OEMs. The compactness and high spectral density of the resulting solution provides both high spatial- and spectral resolution sensing – allowing opportunities in smartphone, IoT, healthcare and wearables to be addressed.

Incorporation of spectral camera modules into mobile devices is part of an ongoing trend to add advanced sensing functionality. Spectral imagers will be able to capture image data across many spectral channels, beyond the conventional red, green and blue color channels. This will allow measuring of objects' spectral signatures. Among the applications that will benefit are image acquisition where more accurate auto white balancing is needed, personalized cosmetics and skincare, remote healthcare, and smart

gardening/agriculture.

According to Vincent Mouret, CEO of Spectricity: "Successful installation of our technology, which was originally pioneered by imec, at X-FAB's volume production facilities is a key milestone for Spectricity in our ambition to serve the global smartphone market. This takes us closer to achieving our objective of supporting mass adoption of spectral sensing in mobile devices."

Jörg Doblaski, CTO of X-FAB, comments: "We have been really impressed with the engineering skills of the Spectricity team, and are excited about the successful cooperation with an innovative European company enabling spectral imager products. Transfer of their technology has been accomplished within a short timeframe, with initial lots already meeting the required specifications."

Spectricity plans to start sampling its spectral imaging solution fabricated via X-FAB later in 2022.

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About X-FAB

X-FAB is the leading analog/mixed-signal and MEMS foundry group manufacturing silicon wafers for automotive, industrial, consumer, medical and other applications. Its customers worldwide benefit from the highest quality standards, manufacturing excellence and innovative solutions by using X-FAB's modular CMOS and SOI processes in geometries ranging from 1.0 μm to 130 nm, and its special silicon carbide and MEMS long-lifetime processes. X-FAB's analog-digital integrated circuits (mixed-signal ICs), sensors and micro-electro-mechanical systems (MEMS) are manufactured at six production facilities in Germany, France, Malaysia and the U.S. X-FAB employs about 4,000 people worldwide. Learn more at xfab.com.

About Spectricity

Spectricity is a fabless company headquartered in Belgium developing and manufacturing spectral sensing solutions using CMOS technologies. These solutions are designed for high-volume production, and targeted at use in consumer and mobile devices. The company was incorporated in 2018, and is backed by venture capital investment. Its technology builds on an exclusively-licensed patent portfolio from imec, a world-leading R&D and innovation hub in nano-electronics and digital technologies. The technology and the products powered by it are the fruit of more than 15 years of research and development. Learn more at spectricity.com.



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Acronyms

CMOS	Complementary Metal Oxide Semiconductor
IoT	Internet of Things
NIR	Near-Infrared
OEM	Original Equipment Manufacturer