

Hamamatsu Photonics Europe strengthens advanced imaging solutions with Fairchild Imaging CMOS sensor technologies

Expanded access to high-performance CMOS image sensors supports demanding applications in X-ray, medical, academic, and space-related imaging.

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Hamamatsu Photonics Europe is actively promoting Fairchild Imaging's advanced CMOS image sensor technologies to customers across Europe, following The Group's acquisition of the [company in 2024](#). This addition broadens the range of applications Hamamatsu can support, bringing further expertise in high-performance CMOS image sensors for demanding X-ray, medical, scientific, space-qualified, and other advanced imaging environments.

Fairchild Imaging's technologies support challenging imaging requirements, including low-noise performance, high resolution, and a variety of pixel sizes, with technical support and application knowledge that complement Hamamatsu's existing CMOS technologies, broader photonics portfolio, and European customer support network.



Offering Fairchild Imaging technologies to European customers

Hamamatsu Photonics Europe is strengthening its advanced imaging offering by actively promoting Fairchild Imaging's CMOS image sensor technologies to customers across Europe.

Fairchild Imaging, established in 1920, now a Hamamatsu Photonics company, develops world-class CMOS image sensors for the most demanding imaging applications. Its technologies complement Hamamatsu's existing photonics portfolio and expand the range of imaging capabilities available to customers working in the most technically challenging environments.

Supporting demanding imaging applications

Advanced imaging applications often require a careful balance of sensitivity, resolution, noise performance, speed, and reliability. Through the integration of Fairchild Imaging technologies, Hamamatsu can now support customers with exceptionally low noise of $0.25 e^-$ RMS, enabling imaging deeper in the low photon regime, including down to single-photon counting. This is paired with high dynamic range enabled by proprietary dual-gain architecture.

Key application areas include X-ray imaging, medical imaging, scientific imaging, and space-related imaging, where CMOS sensor performance plays an important role in enabling precise and reliable image acquisition.

A broader portfolio of CMOS sensor capabilities

Fairchild Imaging brings world-leading expertise in advanced CMOS image sensor design, including technologies suited to low-light and challenging imaging conditions. This strengthens Hamamatsu's ability to support customers from component selection and custom sensor development through integration into advanced imaging systems. The expanded portfolio includes CMOS sensors for X-ray imaging, medical imaging, and space-qualified applications, as well as opportunities for custom advanced sensor development tailored to specific application requirements.

Key example products include:

F40 detector for X-ray imaging

High resolution, wide dynamic range, compact form factor, USB 3.0. [Read more.](#)



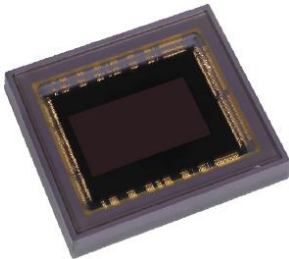
F3D detector for medical imaging

High resolution, high speed, low dose. [Read more.](#)



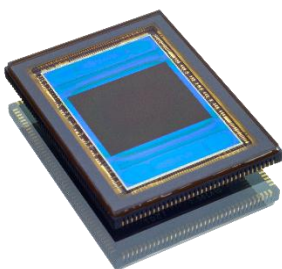
HWK4123 for space imaging

Exceptional fidelity in 4K, 4/3", 10.5MP, BSI, sCMOS 3.1 technology. [Read more.](#)



CIS2521 for space imaging

TRL-9 workhorse 5.5MP sCMOS sensor for high reliability space-qualified imaging. [Read more.](#)



Expanding application reach through advanced CMOS sensor expertise

With the addition of Fairchild Imaging, Hamamatsu is expanding the range of application requirements it can support with advanced CMOS image sensor technologies. Fairchild Imaging's experience in space applications, together with its high-resolution CMOS sensor technologies for X-ray and medical imaging, strengthens Hamamatsu's ability to support customers working at the limits of imaging performance.

This expanded capability is especially relevant where image quality, reliability, and application-specific sensor design are critical.



“Fairchild Imaging’s CMOS sensor technologies are a strong complement to Hamamatsu’s existing image sensor portfolio,” said Ljiljana Durdevic, Technology and Market Expert, Hamamatsu Photonics Europe.

“By actively introducing these capabilities to customers across Europe, we can support a wider range of demanding imaging applications, including space-qualified imaging, X-ray imaging, medical imaging, and other high-performance environments where sensor quality and reliability are critical.”

About Fairchild Imaging

Fairchild Imaging, a Hamamatsu Photonics company, develops world leading high-performance CMOS image sensors used in the most demanding applications like space exploration, scientific and low-light imaging, X-ray and medical imaging. Visit their website for more information: www.fairchildimaging.com

About us

Hamamatsu Photonics is a leading provider of cutting-edge photonics technology and products. With 70 years of experience, the company delivers innovative solutions to customers across a wide range of industries, including medical, scientific research, industrial, and telecommunications. Hamamatsu Photonics offers a comprehensive range of products, such as imaging sensors, light sources, and optical systems designed to meet customers’ unique needs.

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