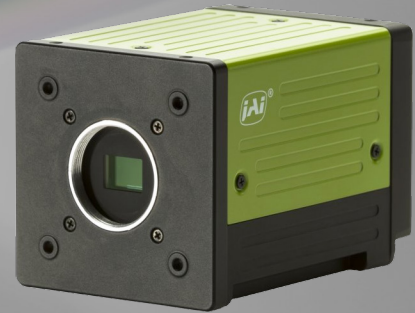


Meet Flex-Eye



Flex-Eye™ is a trademark of JAI

High performance multispectral cameras tailorable to your specific application requirements

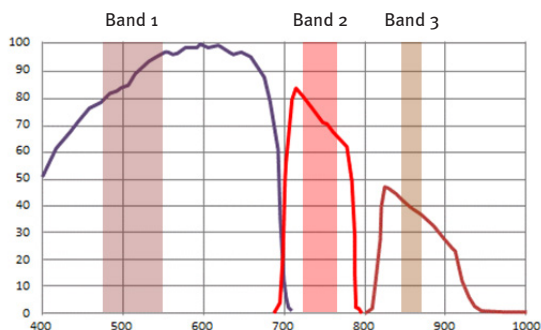
Multispectral imaging, your way

Like many vision system designers, you understand how multispectral imaging can help your system catch more defects and achieve higher quality and higher productivity than ever before. But you also know how hard it can be to find a multispectral camera with just the right combination of resolution, speed, and spectral response to fit your specific application...until now.

JAI's unique Flex-Eye technology lets you create the perfect multispectral camera to meet your requirements. Flex-Eye leverages JAI's unique Fusion Series multispectral area scan prism technology to let you choose the number of wavebands, the sensor resolution, and the ideal spectral range of each channel in your multispectral camera.

Personalized prism technology

Like JAI's standard Fusion Series multispectral cameras, the Flex-Eye process starts by letting you choose from a two- or three-sensor prism configuration outfitted with either 1.6-megapixel or 3.2-megapixel Sony Pregius™ CMOS global shutter imagers. After that, it's up to you. Define specific wavebands as narrow as 25 nm wide, located exactly where you need them across the visible and NIR spectral ranges*.



* Placement and width of wavebands limited to 5 nm increments.

Specify three separate bands at full resolution or use a Bayer sensor in the visible region to interpolate or extract additional spectral waveband information during post processing. Thanks to a common optical path through the prism, there's perfect registration between all wavebands with no optical issues or performance degradation due to real-time alignment algorithms. That means multispectral capabilities, tuned to your application, at frame rates of more than 200 fps if needed†.

With JAI's Fusion Flex-Eye Solution you get:

- Customized multi-sensor, multispectral cameras tailored to your application requirements.
- 2 or 3 wavebands located anywhere between 400-1000 nm.
- Option to use Bayer sensors in visible spectrum to provide additional spectral data.
- Proven prism technology for perfect alignment between all spectral channels.
- Ability to specify wavebands as narrow as 25 nm at increments of 5 nm.
- Low-noise Sony Pregius IMX273 or IMX252 CMOS imagers (1.6 megapixels or 3.2 megapixels per waveband).
- High performance 10GigE interfaces for high frame rates with multi-streaming capability.

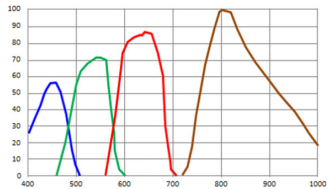
† Based on 1.6-megapixels per channel and 8-bit pixel formats.



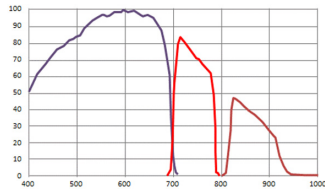
Fusion Flex-Eye

Make some waves!

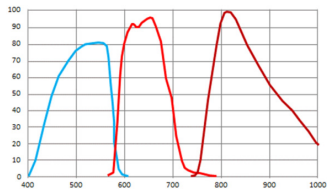
Flex-Eye gives you hundreds of multispectral possibilities to meet your project requirements. Let us help you arrive at your perfect configuration.



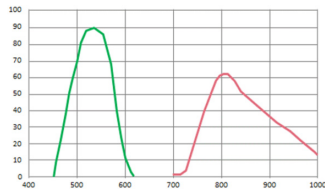
Example 1



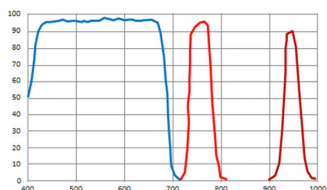
Example 2



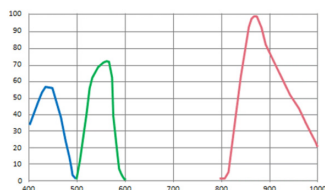
Example 3



Example 4



Example 5



Example 6

Learn more about multispectral imaging techniques and applications.

Download the free tech guide at:

www.jai.com/technology/tech-guides →

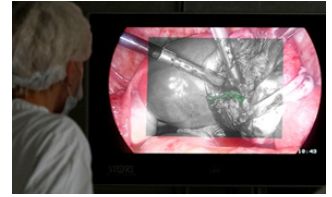
Go to Flex-Eye Configurator →

A versatile multispectral solution

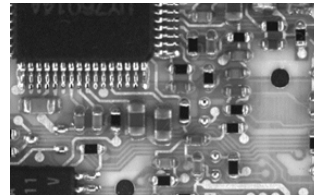
Fusion Flex-Eye solutions can be tailored to fit a wide range of industries and applications such as those shown below.



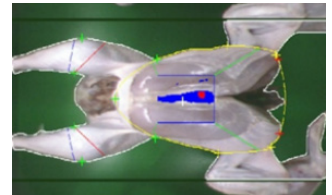
Crop health, intelligent farming, environmental studies...



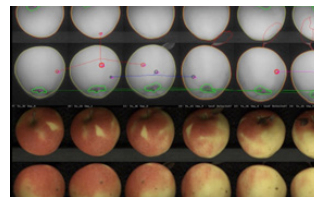
Surgical guidance, life sciences, forensics...



Electronics, recycling, scientific research...



Meat and poultry inspection...



Inspection of fruits, vegetables, nuts, grains, tea leaves...



Pharmaceuticals, cosmetics, and their packaging...



Currency inspection, passports, biometrics...



Fish farming and many more...

Ready to get started?

Our online configurator provides an easy, step-by-step process for quickly defining your ideal solution. You specify the number of sensors, the resolution, and whether Bayer or monochrome sensors are to be used in the visible spectrum. Then an intuitive GUI lets you drag and place your wavebands on a spectral chart with built-in validation rules to guide you to a working configuration.

Set waveband 1

400

500

600

700

800

900

1000

Waveband 1

442 - 682 nm

Peak: 510 nm

Sensor type: Bayer

Waveband 2

722 - 782 nm

Peak: 750 nm

Sensor type: monochrome

Waveband 3

822 - 932 nm

Peak: 875 nm

Sensor type: monochrome

3.3 megapixels per waveband/channel

Configure configuration

Europe, Middle East & Africa
JAI A/S
Email: camerasales.emea@jai.com
Phone: +45 4457 8888

Germany
JAI A/S
Email: camerasales.emea@jai.com
Phone: +49 (0) 6022 26 1500

Americas
JAI Inc.
Email: camerasales.americas@jai.com
Phone: +1 408 383 0300

Asia Pacific
JAI Ltd.
Email: camerasales.apac@jai.com
Phone: +81 45-440-0154

China
JAI Technology (Beijing) Co., Ltd.
Email: camerasales.apac@jai.com
Phone: +86 10-5397-4049

www.jai.com



See the possibilities