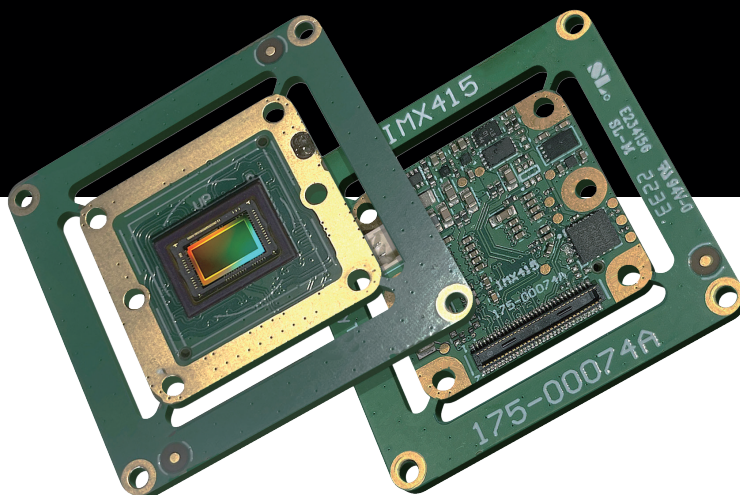


Oclea™ IMX415 Sensor Module

The Oclea™ IMX415 sensor module is designed to deliver ultra-high-definition imaging for the most demanding applications.

With 8.46-megapixel resolution and advanced low-light performance, this 1/2.8" back-illuminated CMOS sensor captures precise detail and vibrant color in challenging conditions. Ideal for smart surveillance, robotics, and industrial automation, it supports real-time 4K video capture, providing engineers with the clarity and speed required for next-generation vision systems.



KEY FEATURES

8.46 MP resolution, 1/2.8" optical format

Provides 4K ultra-high-definition resolution in a compact sensor, enabling precise detail capture for applications like smart city surveillance, drone imaging, and robotic vision.

4K UHD video support

Capable of streaming 3864x2192 video at 60 frames per second, ensuring smooth, detailed footage for analytics and real-time monitoring systems.

Back-illuminated structure for enhanced low-light sensitivity

The BSI pixel architecture increases light capture efficiency, improving performance in scenes with limited or uneven illumination.

High-speed readout for low-latency imaging

Supports rapid data transfer from sensor to host, enabling real-time decision making in time-critical systems such as traffic monitoring or factory automation.

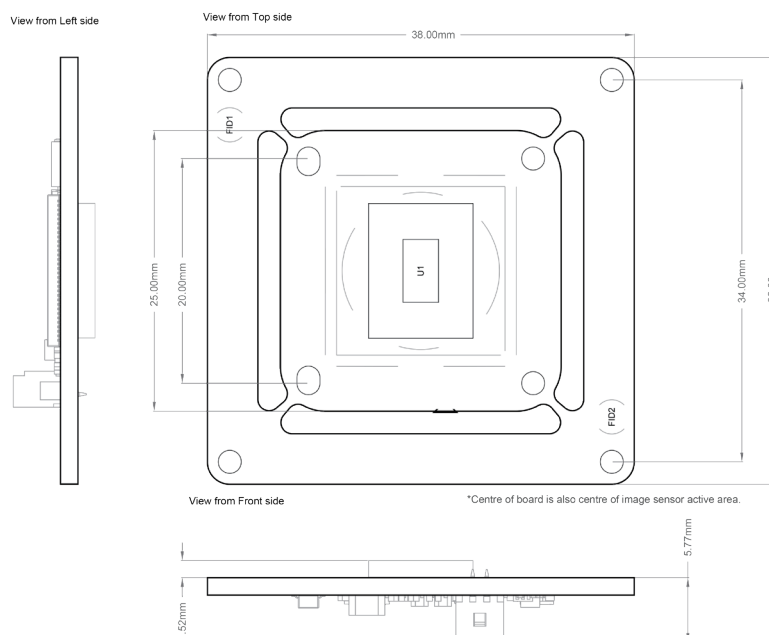
High dynamic range for balanced exposure in varying lighting conditions

Captures a wide range of tonal detail in scenes with both dark shadows and bright highlights, reducing the need for post-processing or exposure correction.

The Oclea™ IMX415 sensor module

Size 38 x 38 x 6.54 mm • **Weight** 5g *

* Can be depanneled down to **Size** 25 x 25 x 6.54 mm • **Weight** 3g



MODULE SPECIFICS**Resolution: 3864x2192 (≈ 8.46 M)**

- Image Sensor Type: Sony CMOS with advanced low-light tuning
- Target Applications: 4K industrial vision, outdoor surveillance
- Image Sensor Type: Sony CMOS with advanced low-light tuning
- Target Applications: 4K industrial vision, outdoor surveillance
- Image Sensor Type: Sony CMOS, Exmor-R architecture
- Target Applications: UHD surveillance, robotics, drone vision
- Supports sensor synchronization and variable-speed shutter

Optical Format: 1/2.8"**Pixel Size: 1.45 μ m x 1.45 μ m****Frame Rate: Up to 60 fps****Interface: MIPI CSI-2 (4 lanes)****INPUT/OUTPUT INTERFACES****MIPI CSI-2 data interface**

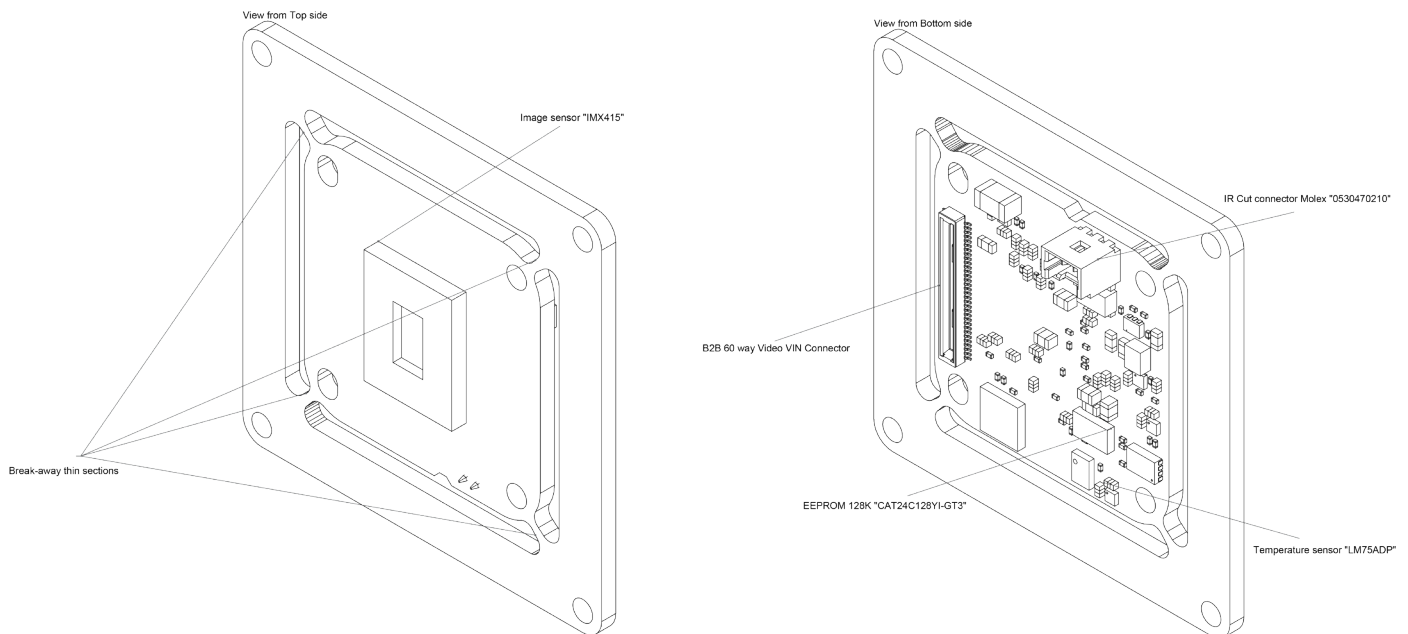
- Simple plug-and-play integration with standard MIPI hosts
- Auxiliary I/O for external triggering and synchronisation
- GPIO, PWM, and UART support for advanced integration
- GPIO and I2C support for sensor control and peripheral interface

I2C control interface**Flexible power input options****POWER CONSUMPTION****Typical power consumption: < 1W (module dependent)**

- Efficient thermal profile allows for compact passive enclosures.

COMPANION LENS OPTIONS**2.8mm M12 wide-angle lens, F2.0, 120° HFOV**

- Suitable for wide-angle smart city and monitoring applications

4.0mm M12 lens, F2.2, 85° HFOV**8.0mm M12 telephoto lens, F1.8, 45° HFOV****The Oclea™ IMX415 sensor module**

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