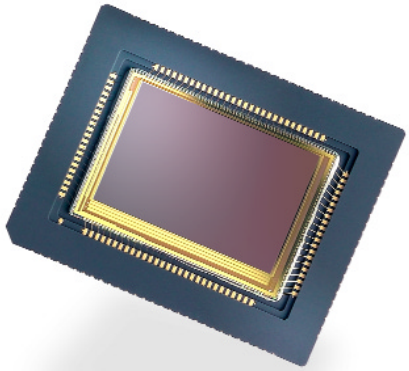
FOVEON®

Foveon® X3™ CMOS Image Sensor
F7-35X3-A25B



Features

Foveon® X3™ Pixels

- Three photodetectors are layered to achieve full-measured color in each pixel.
- Images have improved sharpness and immunity to color sampling artifacts such as moiré patterns.
- In contrast to color filter arrays that use light-absorbing filters, the X3 technology converts light of all colors into useful signal information at every pixel location.

Variable Pixel Size (VPS)

- Several neighboring pixels can be grouped together on-chip to obtain the effect of a larger pixel.
- Enables flexible video capture at a variety of resolutions.
- Enables higher-ISO mode at lower resolutions without sacrificing low-noise performance.

Ultra Low Power

- Use of the most advanced CMOS process technology allows for ultra low power.
- Input voltages to the sensor are less than 2.5 V.
- Power consumption is less than 50mW during readout, less than 10mW in standby mode, and less than 100µW in power down mode.

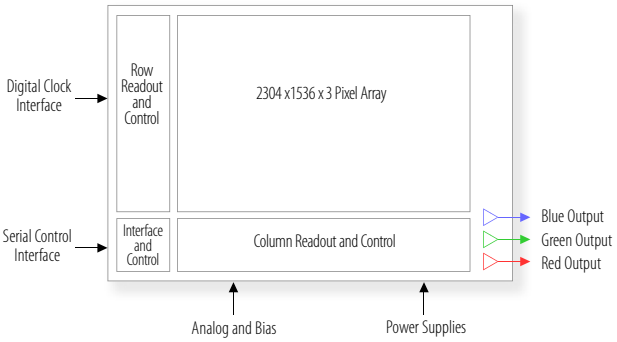
Low Noise

- Foveon has pioneered the use of CMOS sensors for high-quality image capture.
- The Foveon X3 image sensor offers extremely low-noise readout and very high dynamic range.
- Proprietary readout circuits eliminate many of the fixed pattern noise artifacts commonly associated with CMOS image sensors.

Blooming Immunity

- The Foveon X3 image sensor has substantially greater resistance to the blooming that is characteristic of CCD image sensors.

The F7-35X3-A25B is a 25mm-diagonal high-resolution CMOS image sensor that employs Foveon X3 technology. Foveon X3 pixels capture full-measured color images and completely eliminate the need for any color interpolation. This is accomplished through the unique properties of the Foveon X3 proprietary layered-photodiode image sensor design. Because full-measured RGB color is captured, the effective resolution is much higher than that of image sensors that use color filter arrays. Foveon X3 image sensors deliver the sharpest images possible for a given optical format.



Specifications

Total Pixels	2304 x1536 x 3	Format of X3 pixels within the array
Effective Pixels	2268 x1512 x 3	Format of optically active X3 pixels
Effective Photo Detectors	10.3 million	Total number of measured color data points captured by image sensor
Pixel Pitch	9.12µm	Center-to-center spacing of X3 pixels
Effective Area	20.7mm x 13.8mm	
Effective Diagonal	25mm	
Aspect Ratio	3:2	
ISO	100	Full resolution mode
Frame Rate	2FPS for Full Array; 25FPS for 576 x 384 x 3 (VPS)	Maximum number of frames per second in the rolling shutter mode
Variable Pixel Size Increments	Powers of 2, independently in each direction	Number of X3 pixels of one color to average together for output

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