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X3 TECHNOLOGY WHAT'S A PIXEL

Pixel Counting Definitions

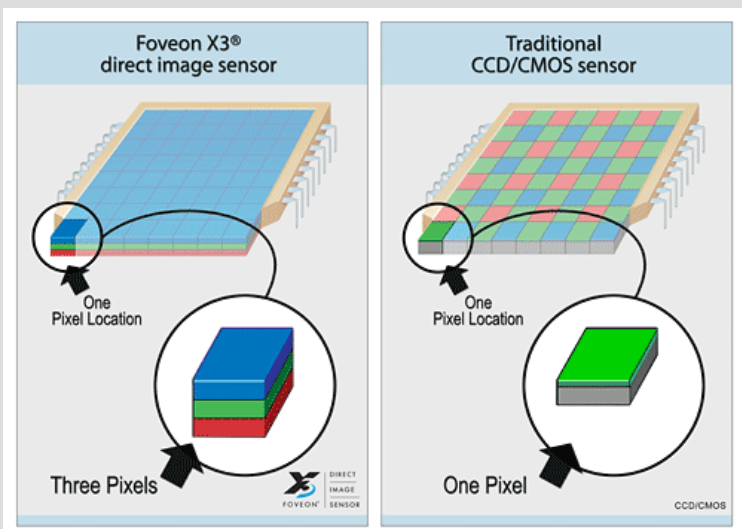
Prior to the existence of the Foveon X3 direct image sensor, there has been a 1:1 relationship between the number of pixels (photodetectors) and the number of pixel locations for a traditional CCD and CMOS image sensor. Given this relationship, the generic term "pixel" has been commonly used to reference both the pixel (photodetector) and the pixel location. Foveon direct image sensors are a new type of image sensor that incorporates three pixels (photodetectors) at every pixel location on the image sensor. The definition of a pixel as indicated below is consistent with standard industry conventions as applied to CCD image sensors, CMOS image sensors, and the Foveon X3 direct image sensor.

Pixel

A pixel on the image sensor of a digital camera is a light absorbing element (photodetector) that converts light (photons) into electrons. A pixel is also referred to as a pixel sensor when there is a need to distinguish the pixel from its location.

Pixel Location

A pixel location is the X,Y coordinate on the two-dimensional grid of an image sensor at which the pixel is located.



A Foveon X3 direct image sensor consists of three layers of pixels. Each pixel detects 1 color sample.

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