detect the amount of light that reaches filterless, but don’t have the simulator. 16.3-megapixel K-5 II S are also AA-
Pentax’s 20.1-megapixel K-S2 and shoot with or without the AA effect. As an AA filter would. This lets you slightly blur the image at the pixel level right one pixel, then up one pixel to
Shake Reduction mechanism to rap-
simulator uses the camera’s sensor-shift AA filter simulator, when desired. The
respectively), but you can activate the AA filter (24.3 and 20.1 megapixels, feature APS-C CMOS sensors with no
Idly move the sensor down one pixel, Shake Reduction mechanism to rap-

** Price includes 18-55mm kit zoom

* Weight includes battery

** Price includes 18-55mm kit zoom

The “pixels” in image sensors just
them, not its wavelength (color). To pro-
duce color images, conventional image sensors feature a regular grid of red, green and blue filters over the pixels (called a Bayer array, after the Kodak scientist who developed it), so that each pixel receives just one primary color. Data for the missing colors at each pixel is obtained via interpolation using data from neighboring pixels and complex proprietary algorithms in a process known as “demosaicing.” This process results in less resolution from the sensor than a given pixel count should theoretically deliver, and the demosaicing produces color moiré. An AA filter reduces the moiré and aliasing, but further blurs the image at the pixel level.

Sigma’s Merrill cameras (named for one of the creators of the Foveon sensor)—the SD1M DSLR, and DP1M, DP2M and DP3M fixed-lens compacts—all feature a Foveon X3 sensor with three stacked 4800x3200 pixels.