

# Canon develops CMOS sensor with approximately 250 megapixels, the world's highest pixel count for its size

7 September 2015



A camera prototype equipped with the newly developed CMOS sensor. (Shown with EF35mm f/1.4 USM lens.)

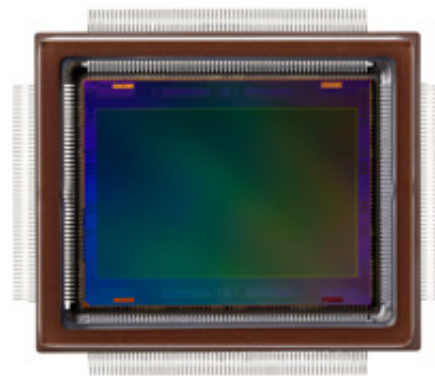
Canon Inc. announced today that it has developed an APS-H-size (approx. 29.2 x 20.2 mm) CMOS sensor incorporating approximately 250 million pixels (19,580 x 12,600 pixels), the world's highest number of pixels for a CMOS sensor smaller than the size of a 35 mm full-frame sensor.

When installed in a camera, the newly developed sensor was able to capture images enabling the distinguishing of lettering on the side of an airplane flying at a distance of approximately 18 km from the shooting location.

With CMOS [sensors](#), increases in pixel counts result in increased signal volume, which can cause such problems as signal delays and slight discrepancies in timing. The new Canon-developed CMOS sensor, however, despite its exceptionally high pixel count, achieves an ultra-high signal readout speed of 1.25 billion [pixels](#) per second, made possible through such advancements as circuit miniaturization and enhanced signal-

processing technology. Accordingly, the sensor enables the capture of ultra-high-pixel-count video at a speed of five frames per second. Additionally, despite the exceptionally high pixel count, Canon applied its [sensor technologies](#) cultivated over many years to realize an architecture adapted for miniaturized pixels that delivers high-sensitivity, low-noise imaging performance.

Video footage captured by the camera outfitted with the approximately 250-megapixel CMOS sensor achieved a level of resolution that was approximately 125 times that of Full HD (1,920 x 1,080 pixels) video and approximately 30 times that of 4K (3,840 x 2,160 pixels) video. The exceptionally high definition made possible by the sensor lets users crop and magnify video images without sacrificing image resolution and clarity.



The Canon-developed 250-megapixel CMOS sensor.

Canon is considering the application of this technology in specialized surveillance and crime prevention tools, ultra-high-resolution measuring instruments and other industrial equipment, and the

field of visual expression.

Provided by Canon

APA citation: Canon develops CMOS sensor with approximately 250 megapixels, the world's highest pixel count for its size (2015, September 7) retrieved 19 October 2019 from

<https://phys.org/news/2015-09-canon-cmos-sensor-approximately-megapixels.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*