

Press release

**CSEM announces the world’s first fully autonomous camera integrated into a patch or a magnet**

## This sticker can see

**Neuchatel, 5 November 2018—CSEM has developed the world’s first fully autonomous camera that can be deployed like a sticker, opening up new possibilities for surveillance and IOT sensors. The patented Witness IOT camera is solar-powered and includes a specially designed CMOS image sensor consuming less than 700uW.**

The growing need for security and surveillance offers opportunities for low-cost autonomous IOT cameras. CSEM has leveraged its unique experience in the design and development of ultra-low-power microsystems to develop a fully autonomous portable camera that can be deployed quickly and easily via an adhesive patch or magnet, a world first.

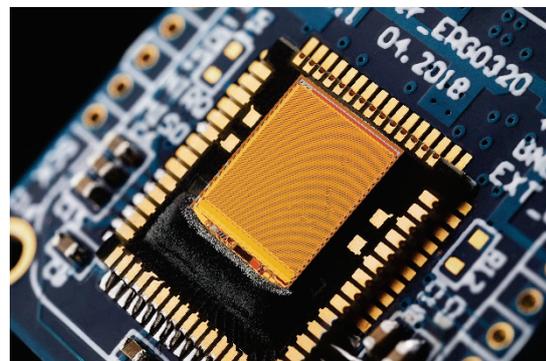
“Enabling a range of applications from unattended surveillance and camera traps to wildlife observation, Witness perfectly embodies CSEM’s technological strategy,” enthuses Alain-Serge Porret, VP Integrated and Wireless Systems at the Swiss Research and Technology Organization. “We aim to deliver autonomous, low-energy-consuming devices combining both intelligence and efficiency.” Forthcoming versions will thus include VGA resolution as well as embedded face recognition.

The patented Witness IOT camera consumes less than 1mW of power in active mode, fully covered by a flexible, high-efficiency photovoltaic cell with an adhesive surface. Suitable for indoor or outdoor use, it is the fruit of years of research and development into the key enabling technologies. An innovative high-dynamic range (120dB) CMOS image sensor consuming less than 700uW @ 10 fps for 320x320 pixels was designed; intelligent embedded software allows triggering by scene–activity detection. The camera records fixed images at 1fps and stores them in flash memory for later USB readout.

CSEM will be demonstrating the Witness camera at Vision Stuttgart Nov 6–8.



*Witness prototype measures 80 mm by 80 mm; The diameter of the camera button is 30 mm, its thickness 4 mm.*



“ERGO” sub-mW CMOS image sensor

## Additional information

### CSEM

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### About CSEM

#### CSEM—technologies that make the difference

CSEM, founded in 1984, is a Swiss research and development center (public–private partnership) specializing in microtechnology, nanotechnology, microelectronics, system engineering, photovoltaics, and communications technologies. Around 450 highly qualified specialists from various scientific and technical disciplines work for CSEM in Neuchâtel, Zurich, Muttenz, Alpnach, and Landquart.

Further information is available at [www.csem.ch](http://www.csem.ch)

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