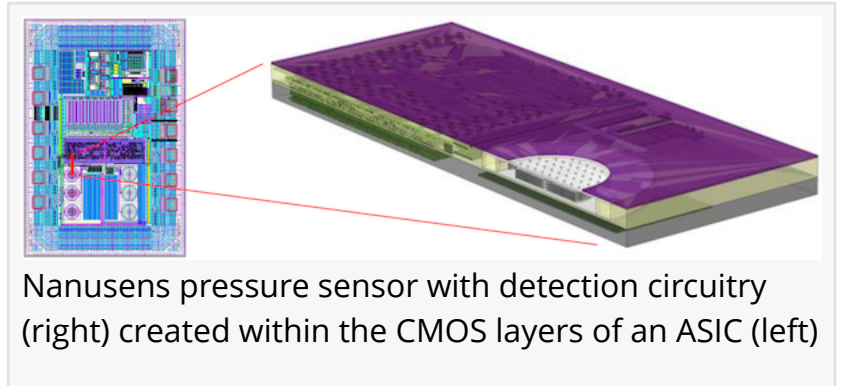


# Semiconductor company has Crowdcube funding round to enable people to invest in technology of embedding MEMS into ASICs

*Now both sensor and its control circuit can be shrunk simultaneously as IP blocks to required CMOS process node to create ASICs with integrated MEMS sensors*

PAIGNTON, DEVON, UK, May 31, 2023 /EINPresswire.com/ -- British semiconductor company, [Nanusens](#), has announced that it has successfully

created a fully digital circuit design to measure the capacitance of its next generation MEMS sensors. This means that both the sensor structure and its detection circuitry can be made at the same time within a chip using standard CMOS processes on whatever process node is required. As a result, ASICs can now be made with several different sensors embedded within them. This



Nanusens pressure sensor with detection circuitry (right) created within the CMOS layers of an ASIC (left)

“

This is a revolution for the MEMS sensor industry. We are already in discussion with companies who want to license this IP.”

*Dr. Josep Montanyà, CEO of Nanusens*

breakthrough in integration of MEMS sensor solutions as IP blocks offers dramatic reductions in costs and size as it completely replaces the current solution of discrete MEMS sensor packages.

Nanusens is currently fundraising on [Crowdcube](#) to provide the funds to port this technology to a range of smaller nodes to meet customer requirements. The minimum investment is £10 and the round, which is already oversubscribed, closes shortly.

Further details at [www.crowdcube.com/companies/nanusens/pitches/bdpADb](http://www.crowdcube.com/companies/nanusens/pitches/bdpADb)

“This is a major milestone for the company,” said Dr. Josep Montanyà, CEO of Nanusens. “The first was successfully making our unique, nanoscale, MEMS sensor structures within the CMOS layers. This solves the problem that conventional MEMS have to be made on custom production lines that have limited production capabilities whereas we can make almost unlimited numbers of our MEMS sensors in CMOS fabs. These are available in standard packages but, like all other

MEMS sensors, they require analog circuitry to detect tiny capacitance changes coming from nano-displacements of their devices in operation. Our breakthrough is the creation of a fully digital detection circuit as this can be scaled down to the process node being used for the sensor structure and pairs to form a complete sensor and detection solution.

“This is a revolution for the MEMS sensor industry,” added Dr Montanyà. “Instead of being discrete packages on a PCB or a multi-die solution, all the required sensors can be integrated into an ASIC just like another IP block. This will provide a major reduction in the BOM, size and power requirements of many, multi-sensor devices, especially portable ones such as smart phones, ear buds, and smart watches. We are already in discussion with companies who want to license this IP.”

Additional reading at [www.eenewseurope.com/en/nanusens-embeds-its-mems-sensors-in-digital-design-crowdfunds-for-development/](http://www.eenewseurope.com/en/nanusens-embeds-its-mems-sensors-in-digital-design-crowdfunds-for-development/) and [www.designworldonline.com/has-integrated-sensor-and-circuitry-reached-a-new-milestone/](http://www.designworldonline.com/has-integrated-sensor-and-circuitry-reached-a-new-milestone/)

About Nanusens™ [www.nanusens.com](http://www.nanusens.com)

Founded in 2014 by Dr. Josep Montanyà and Dr. Marc Llamas, Nanusens is headquartered in Paignton, Devon, England with Research and Development offices in Barcelona, Spain and Shenzhen, China. It leverages the research and expertise developed by the founders' previous company, Baolab Microsystems. Nanusens is VC funded by Inveready ([www.inveready.com/venture-capital/](http://www.inveready.com/venture-capital/)), Caixa Capital Risc ([www.caixacapitalrisc.es/en/](http://www.caixacapitalrisc.es/en/)) and Dieco Capital ([www.dieco-capital.com](http://www.dieco-capital.com)), and several, ultra-high net worth investors. Nanusens has won the Disruptive Innovation of the Year and Emerging Technology Company of the Year at the 2019 TechWorks Awards and Best Campaign of the Year at the 2019 Elektra Awards.

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