



IIT Prints 3D Embedded Sensors in Electrical Packaging for Next Generation MEMS Devices Using Nano Dimension's DragonFly System

Istituto Italiano di Tecnologia plans to use the packaging for rapid device and microsystem prototyping of micro-electro-mechanical systems and wearable transducers

NESS ZIONA, Israel, September 26, 2019 – [Nano Dimension Ltd.](#), a leading additive electronics provider for electronics (NASDAQ, TASE: NNDM), announced today that one of its customers, the Center for Biomolecular Nanotechnologies (CBN) of the Istituto Italiano di Tecnologia (IIT), is using the DragonFly additive manufacturing system to 3D print embedded sensors in electrical packaging.

IIT is a leading research institute in Italy with the mission of promoting technological development and higher education in science and technology. IIT plans to use the electrical packaging for rapid device and microsystem prototyping of next generation micro-electro-mechanical systems (MEMS) and wearable transducers for information and communication technology (ICT) and biomedical applications.

IIT researchers will utilize their expertise in MEMS to develop reliable real time monitoring and energy harvesters for long battery life or battery-free operation of devices.

“One of the main breakthroughs achieved by the researchers was the procedure of embedding the sensors into the interior layers of the packaging, typically a complex, multi-stage process,” said Amit Dror, CEO of Nano Dimension. “3D printing embedded sensors within electrical packaging avoids injection molding processes, reduces the need for human touch in assembly steps compared to traditional methods and eliminates wires, soldering and connectors. Placing the sensors into the interior layers of the package can also free up space, to make the structure smaller, lighter and less expensive to produce.”

Embedding the sensors was achieved by exploiting the DragonFly's extremely precise multi-material inkjet deposition system that allows for simultaneous 3D printing of conductive silver nanoparticle ink (metal) and insulating ink (dielectric) via a layer-by-layer fabrication process. Printing was paused in order to place the sensor on pre-printed recesses and continued to complete the job and seal the sensor.

“The suitability of the DragonFly system to rapidly and affordably manufacture functional prototypes, combined with the broad ecosystem of applications for health and energy harvesting, makes it an ideal choice for our team to achieve higher performance, quick development and print complex shapes not achievable using traditional manufacturing processes,” said [Prof. Massimo De Vittorio](#) (CBN-IIT – Lecce - Italy).



The purchase of the DragonFly by IIT was facilitated by [Cadlog Group](#), Nano Dimension's value-added reseller in Italy, whose mission is to bring additive manufacturing solutions to the electronic industry.

The IIT workforce is composed of about 1,700 people from over 60 countries, working together to conduct cutting-edge research in multi-disciplinary areas such as robotics, nanobiotechnology, industry, computational science and medicine. The research at the IIT CBN in Lecce is focused on the development of micro and nanotechnologies for the human body and for the environment, by studying and exploiting nanomaterials and biomaterials, and their interactions on a nanoscale.

Join us at 3D Additive Manufacturing Technology Day

Come and join technical experts from Nano Dimension at the 3D Additive Manufacturing Technology Day. The day will showcase the latest additive manufacturing innovations and will focus on Nano Dimension's DragonFly LDM system. Among the conference speakers are two of MTC's Technology Managers, Nano Dimension's CEO and Nano Dimension's Applications Manager. In addition, two Nano Dimension customers will present case studies, including [HENSOLDT](#), a global pioneer of technology and innovation in the area of defense and security electronics, and [Istituto Italiano di Tecnologia](#) (IIT).

Date: Tuesday 22 October 2019

Timing: 9.00am to 3.30pm

Venue: [MTC](#), Coventry, CV7 9JU, UK

Register at <https://lnkd.in/gcvJtM2>

The DragonFly LDM printing technology is the industry's only comprehensive additive manufacturing platform for round-the-clock 3D printing of electronic circuitry. The groundbreaking system, introduced by Nano Dimension on July 2019, is designed for Industry 4.0 and manufacturing for the Internet of Things. The DragonFly LDM is the extension of the successful DragonFly Pro precision system for printing electronic components, including multilayer printed circuit boards (PCBs), capacitors, coils, sensors, antennas and more.

About Nano Dimension

Nano Dimension (Nasdaq, TASE: NNDM) is a leading electronics provider that is disrupting, reshaping, and defining the future of how cognitive connected products are made. With its unique 3D printing technologies, Nano Dimension is targeting the growing demand for electronic devices that require increasingly sophisticated features. Demand for circuitry, including PCBs - which are the heart of every electronic device - covers a diverse range of industries, including consumer electronics, medical devices, defense, aerospace, automotive, IoT and telecom. These sectors can all benefit greatly from Nano Dimension's products and services for rapid prototyping and short-run manufacturing. For more information, please visit www.nano-di.com.



Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995 and other Federal securities laws. Words such as “expects,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” “estimates” and similar expressions or variations of such words are intended to identify forward-looking statements. For example, Nano Dimension is using forward-looking statements in this press release when it discusses the benefits and use of its products. Because such statements deal with future events and are based on Nano Dimension's current expectations, they are subject to various risks and uncertainties. Actual results, performance or achievements of Nano Dimension could differ materially from those described in or implied by the statements in this press release. The forward-looking statements contained or implied in this press release are subject to other risks and uncertainties, including those discussed under the heading “Risk Factors” in Nano Dimension’s annual report on Form 20-F filed with the Securities and Exchange Commission (“SEC”) on March 14, 2019, and in any subsequent filings with the SEC. Except as otherwise required by law, Nano Dimension undertakes no obligation to publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. References and links to websites have been provided as a convenience, and the information contained on such websites is not incorporated by reference into this press release. Nano Dimension is not responsible for the contents of third-party websites.

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