

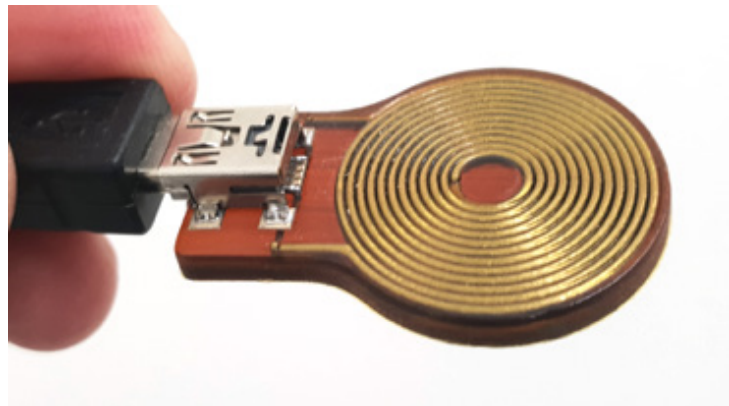
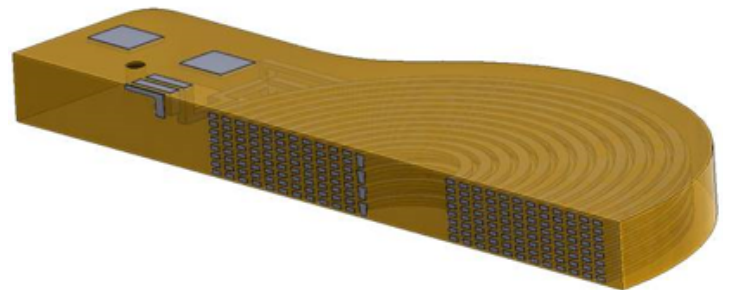
# DragonFly™ Pro Enables Additive Manufacturing of Printed Inductors

Additive manufacturing for printed electronics is rife with possibilities. One of the latest innovations is printing passive components. Because Nano Dimension's DragonFly Pro Precision Additive Manufacturing system offers the unique ability to simply and flexibly build up a wide variety of geometries, printing passive components like inductors is now possible.

An inductor typically consists of an insulated wire wound into a coil around a core. The inductor creates a magnetic field when electric current flows through it. Using Nano Dimension's dielectric material as the core, a coil can be built up in a Gerber file with each circular layer connected with vias or in a 3D file (CAD model) as shown below.

The DragonFly printer allows for accelerated development by quickly printing a design that includes multi-layer inductors and electrical contacts. With the DragonFly Pro, implementing multiple stacked layers of coils and incorporating them in the board design is simplified. As an example, a USB connector soldered into such a printed coil will result in a functional electromagnet when powered. Some examples of applications that can use printed inductors include the following:

- Torque sensors (through inductance)
- Inductive or wireless charging
- Beam electronic adjustment
- Electromagnets



3D Electromechanical device size	26*36mm (1" x 1.4") 3 mm thick
Number of conductive layers	8
Number of wraps/turns around each layer	12
Print time	3 samples printed in 30 hours
Approximate Cost of materials	\$20 / coil

### Conclusion:

The DragonFly Pro Precision Additive Manufacturing system enables rapid prototyping of functional electromechanical parts for accelerated concept development. An inhouse printer enables a reduction in prototyping time from weeks to days and offers the ability to print and test hundreds of designs every year, get products to market faster and build prototypes more cost effectively.

Nano Dimension's DragonFly Pro is an enabler for agile hardware development of a wide variety of PCB and electromechanical designs. With this unique technology, users can design, print and assemble (DPA) quickly, including passive components.

Please contact us for more information [www.nano-di.com](http://www.nano-di.com)