

PRINTED ELECTRONICS DESIGN AND DEVELOPMENT > FROM MOLEX

Developments in printed electronics (PE) have presented new opportunities in several industries by leveraging new materials and by spanning various engineering disciplines. The design flexibility and cost efficiency provided by these recent developments in PE has enabled new applications in the medical, industrial, consumer and home appliance industries.

At Molex, our technical experts possess unique PE industry experience, which includes diverse technical backgrounds ranging from material science to electronics manufacturing to electrical engineering. We apply their expertise to create value for our customers by pushing PE devices beyond the limits of conventional circuitry.



INNOVATIVE APPLICATIONS

Our unique and diverse talent base is the foundation allowing for the development of our comprehensive electrical devices. These include battery-powered sensor systems, specialized RFID labels and mechanisms that enable applications for the Internet of Things (IoT) in consumer products.

1

DISPOSABLE MEDICAL PRODUCTS

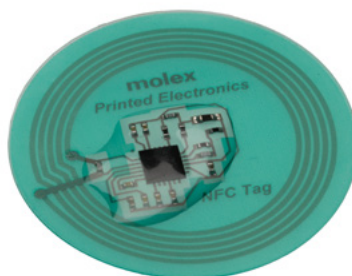
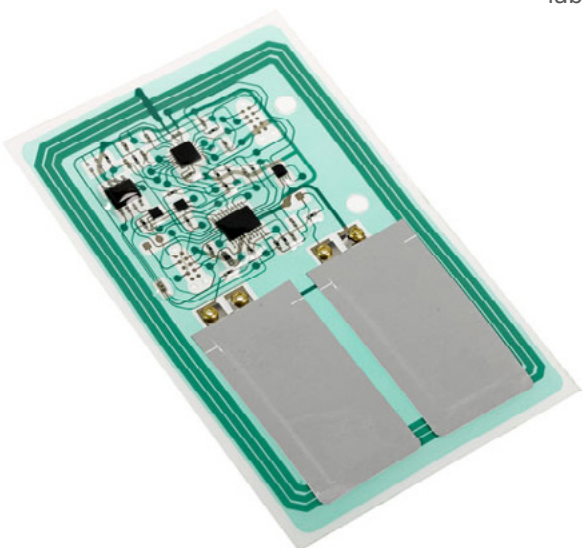
Our projects that involve creating wearable and disposable products for medical applications require the use of materials that are comfortable, flexible and safe for human contact. Remaining environmentally friendly and cost efficient for safe and economical disposal is a priority as we limit or altogether remove the need to re-sterilize medical equipment. This allows for significant time and labor cost savings.

2

BATTERY-POWERED, ACTIVE PE

Another active area of engagement is flexible, eco-friendly batteries for powering electronics. These small-footprint devices provide our customers with the ability to disconnect devices from hardwired power lines, significantly improving the consumer's or patient's experience by reducing the time and the amount of wiring and setup needed.

These are just two examples of how Molex responds to opportunities our customers find in the marketplace — developing new, effective PE applications by providing an alternative to rigid printed circuit boards.



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Molex engineers have developed capabilities to support PE in the five focus areas listed below:

1 Sensor Integration

Molex has successfully designed, integrated and manufactured a variety of sensors (temperature, humidity, capacitive and light sensors) into PE.

2 Wireless Design

Using common technologies such as RFID, NFC and Bluetooth, Molex can employ various wireless communication protocols as determined by the application.

3 Disposable Sensing Solution

Molex PE use a range of thin and soft flexible substrates to maximize the sensor data that can be collected over time. After use, PE products can be discarded.

4 Intricate Component Supply Chain

Molex has existing relationships with global electronic component suppliers to provide products on time and on budget.

5 Advanced Ink/Substrate Development Partner

Trusted ink and substrate supplier relationships allow Molex to have early insight and access to new products and technologies.

APPLICATIONS

Automotive

Commercial Vehicle

Consumer

Fitness
Personal Care
Wearables

Connected Home

Smart Appliances
Home Automation

Medical

Patient Monitoring

Industrial Automation



Smart Appliance



Patient Monitoring



Wearables

THE MOLEX ADVANTAGE >

At Molex, we apply expert knowledge and experience to successfully design and develop innovative printed electronics. Our wide-ranging capabilities provide excellent PE solutions to meet our customers' growing needs and their complete satisfaction.

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www.molex.com/capabilities/pedesign.html

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