



# BotFactory

Rapid Desktop PCB Fabrication

Nicolas Vansnick

✉ [nico@botfactory.co](mailto:nico@botfactory.co)

☎ +1 (347) 377-2687 x1002

🌐 [www.botfactory.co](http://www.botfactory.co)

## Users turn to BotFactory when

### SUPPLY CHAIN



**Impatient about long  
development cycles**



**Uneasy about copycats  
and tampering**



**Frustrated with  
CM back-and-forth**

### INTERNALLY



**Delayed by  
red tape**



**Nervous to  
stay in budget**



**Looking for new PCB  
materials and form  
factors**

# We made the PCB Manufacturing Process



## Quick

Reduce your turnaround time from weeks to only a few hours



## Easy

When you design, many iterations are required. By reducing lead time and cost, you can focus on what matters



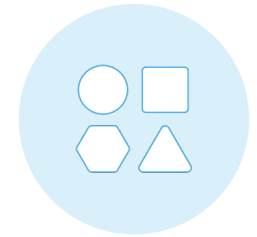
## Affordable

\$0.8-1.75/sq in/layer  
\$0.4-0.87/sq in (conductive)  
\$0.4 to 0.87/sq in (insulating)  
Same price for rigid or flexible materials



## Safe

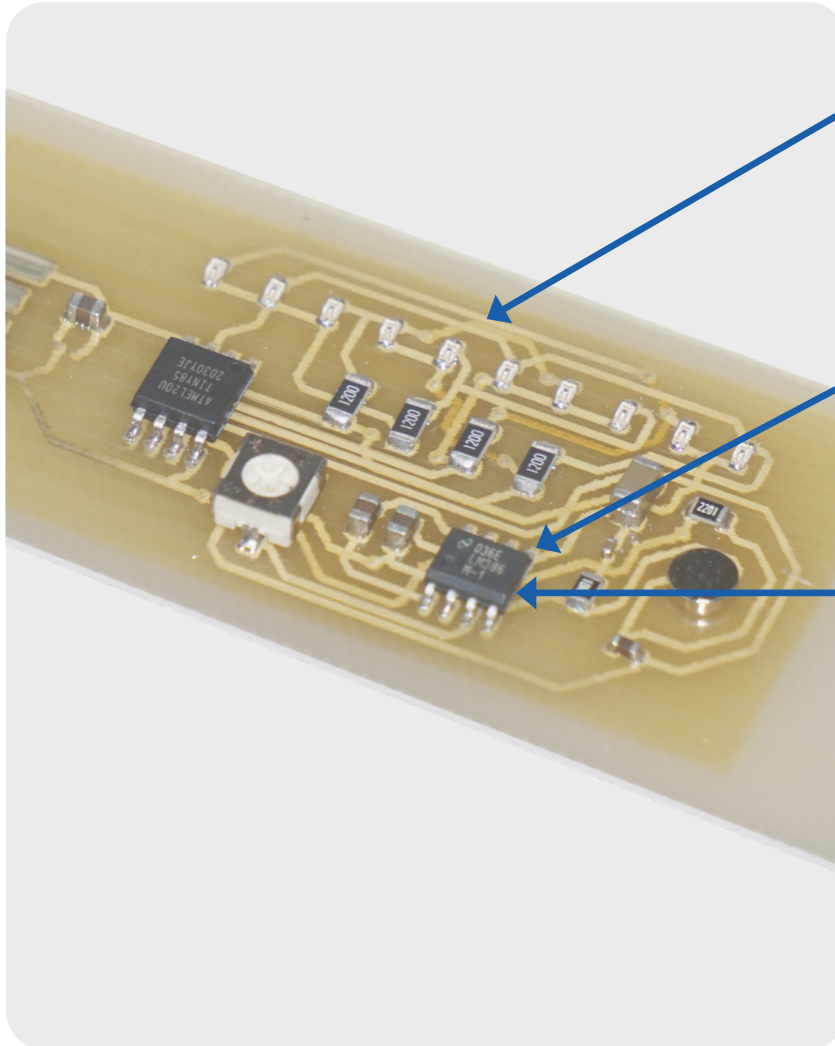
Keep your IP in-house



## Flexible

Adapt to new form factors & use rigid, flexible, or exotic materials (e.g., glass, paper, coin)

# Rapid Additive Manufacturing of Printed Circuit Boards



## Step 1: Print

Conductive and insulating inks create a multi-layered circuit

## Step 2: Paste

Conductive glue or solder paste is extruded

## Step 3: Assemble

Components are automatically placed on the paste to finish the board

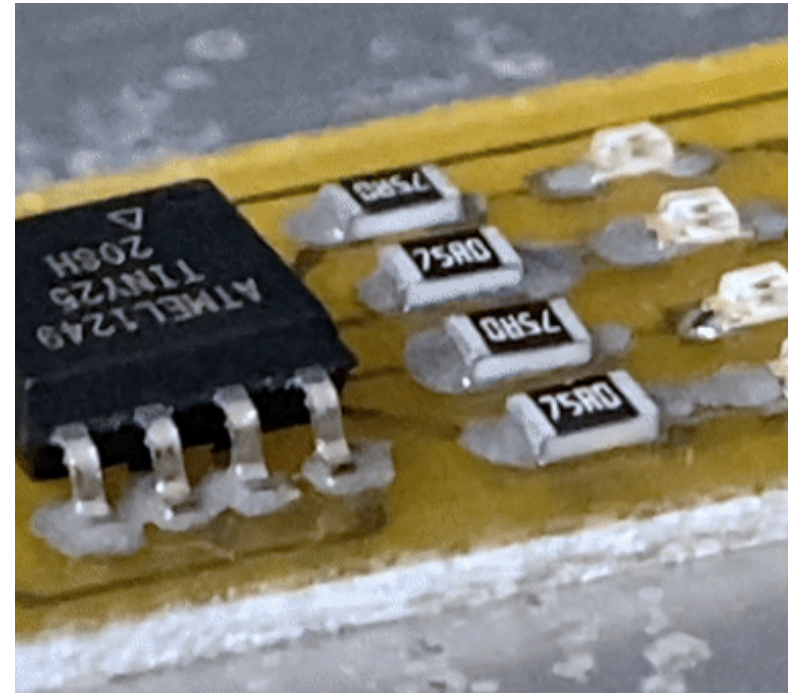
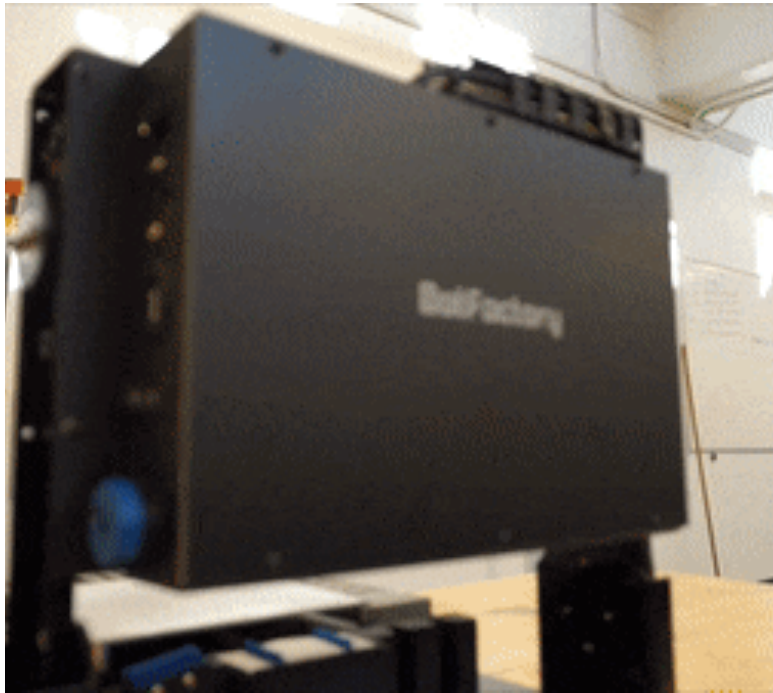


**CLICK HERE**

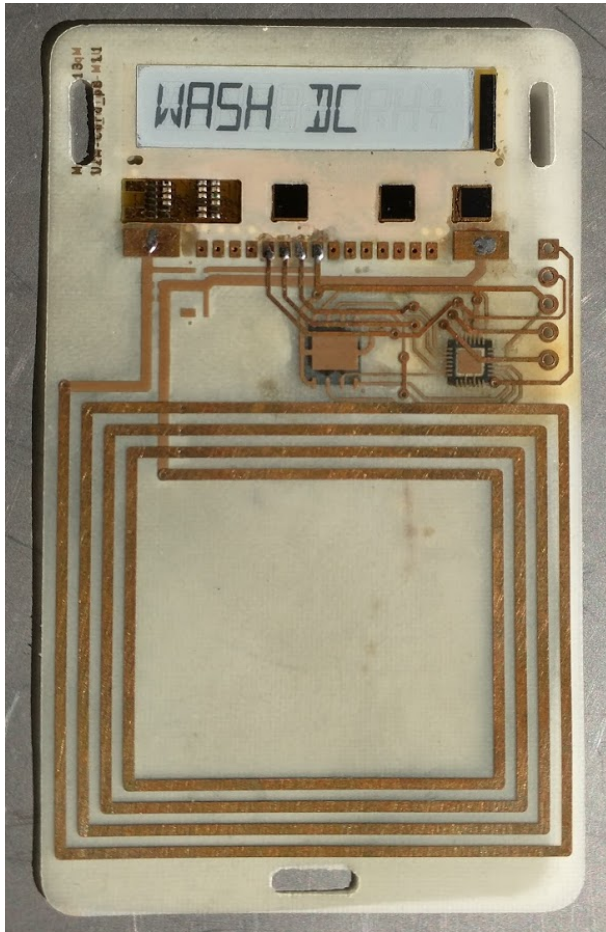
to watch 45s video demo



## Rapid Additive Manufacturing of Printed Circuit Boards

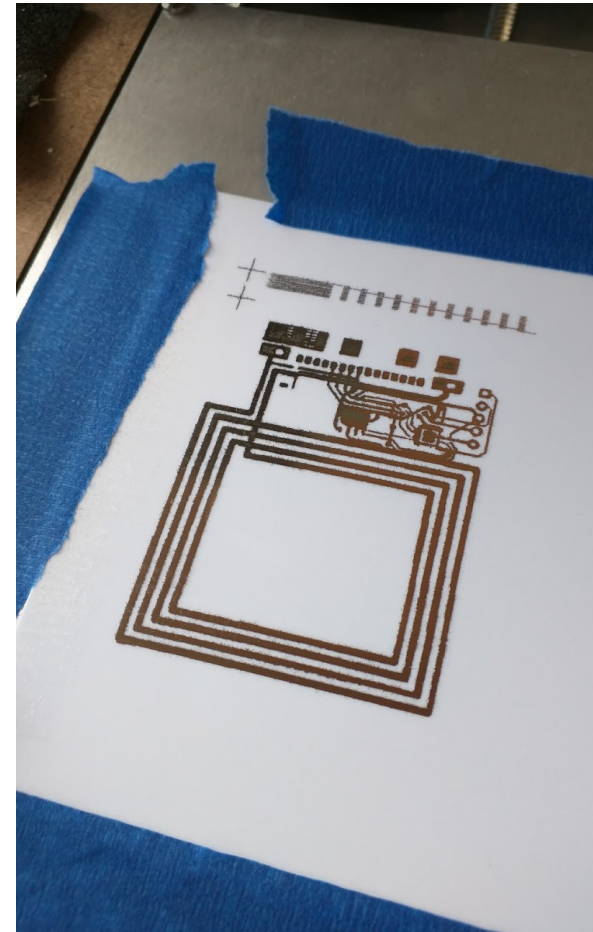


## Our last JIFX



### Hack a board

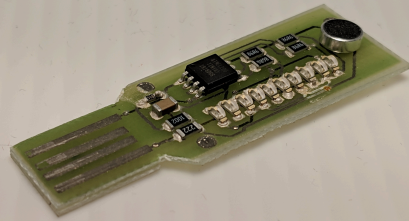
During our experiment, we took a picture of a target PCB, extracted the traces, and copied the PCB, all in under 2 hours



## Some of Our Projects

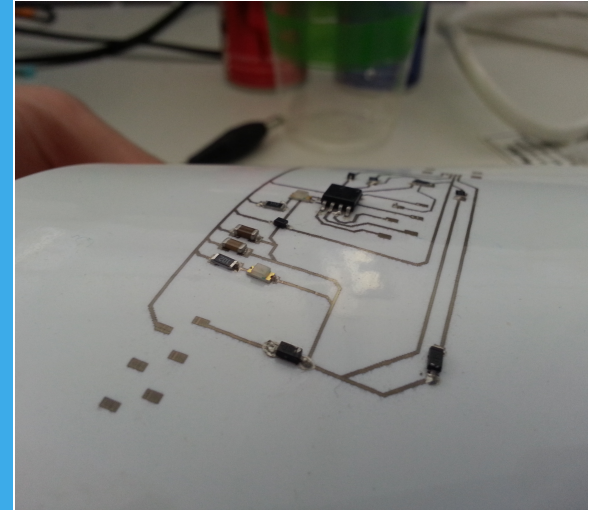
### Rapid Prototyping

FR-4 boards, such as this Larson scanner, are created, tested, and iterated in record times



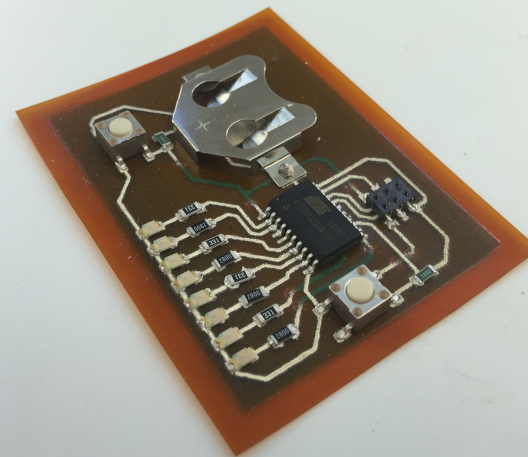
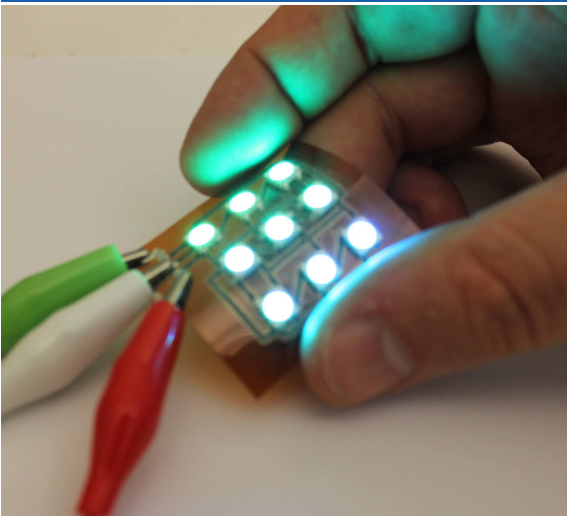
### Smart Packaging

New materials open a whole new range of applications, such as this Arduino circuit on Kapton tape



### Flexible Electronics

Flex circuits can bend to adopt the shape of the casing. Price is a big restriction against mass adoption. This light fixture was made for a few dollars



### Multilayered Flex

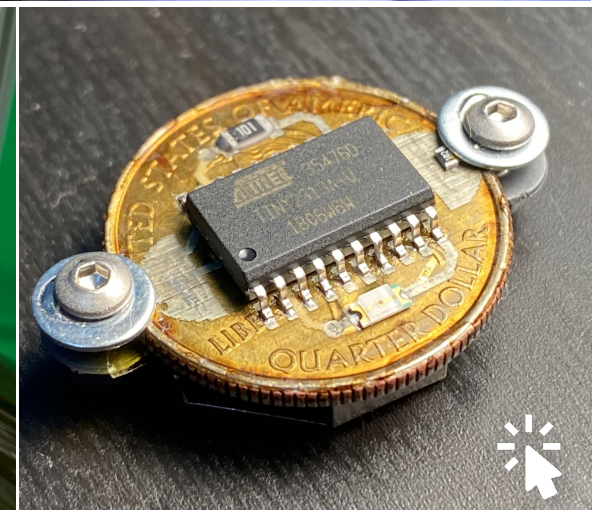
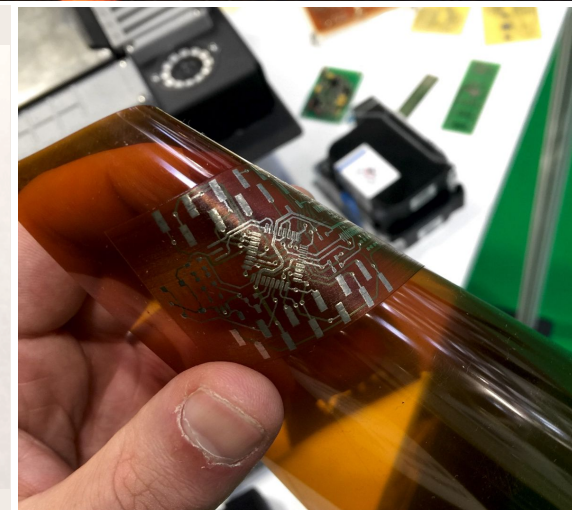
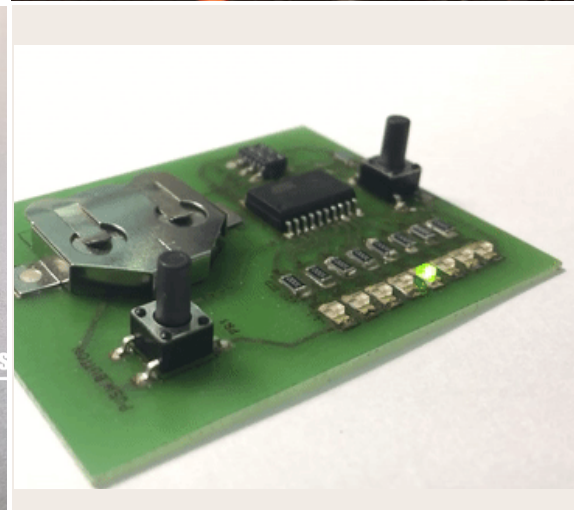
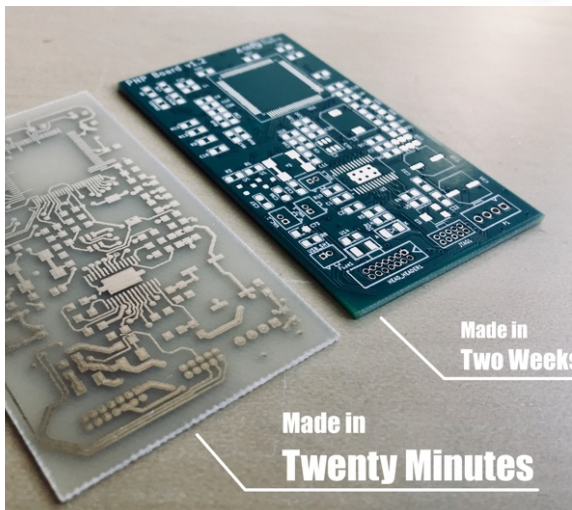
Single layer PCBs are pressed together to create multilayer boards. Layer by layer inkjet printing removes the need for a press and plating process



## Some of Our Projects

### e-Textile

NCSU researchers print highly conductive traces on fabrics that remained highly conductive after thousands of bending cycles and extreme stretching.

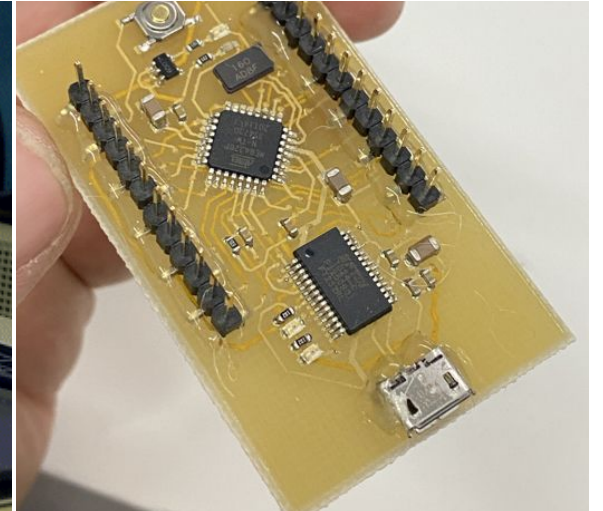
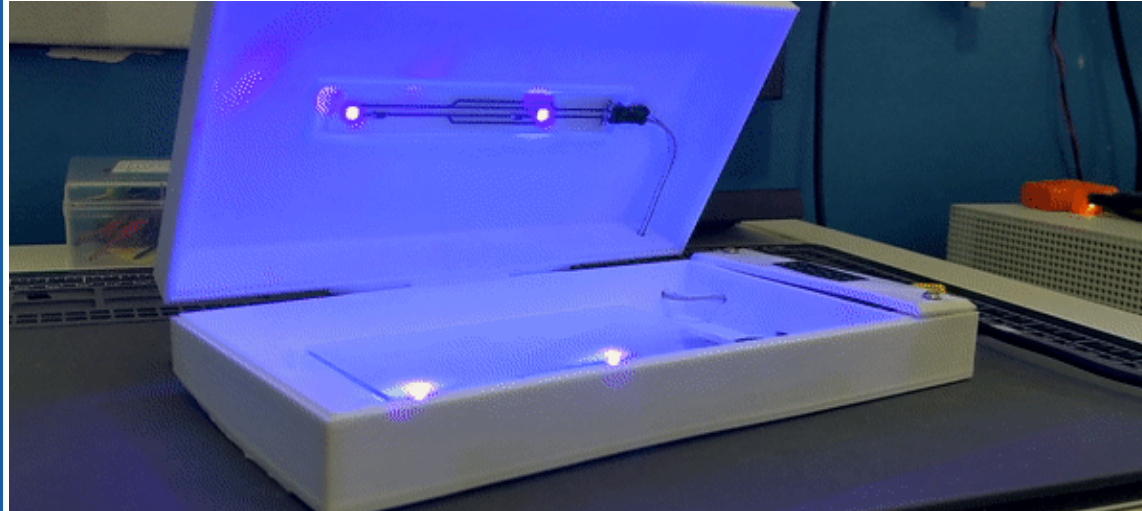




# Some of Our Projects

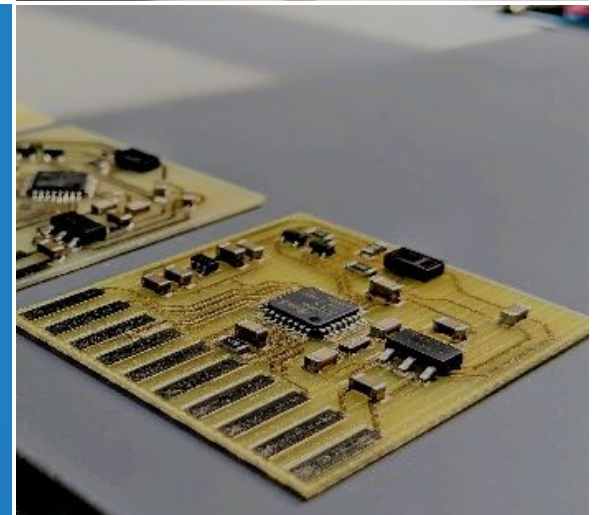
## UV Sanitizer

Clean items with germ-killing UVc light and ration your cleaning supplies.



## Combine 3D Printing Tech

Combine 3D printing PLA and electronics to create fully functioning devices





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Let's talk

