

# miniPCBs

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## Introduction

Electronic circuits are a fundamental portion of electrical engineering education. This includes circuits that are placed in ceramic packages and circuits that are laid out on printed circuit boards.

## Engineering Observation

There is a market for educational materials that help students to advance from understanding circuit fundamentals to understanding complex analog and digital circuits.

The current practice of using a breadboard and jumper wires to fabricate an electric circuit has the inconveniences of being error prone, inconsistent with PCB performance, unwieldy for transportation and storage, and fragile for system prototyping.

It makes sense to create small PCBs with layouts of typical electronic circuits so that students can fabricate their circuits by soldering components.

The only documentation required to sell such PCBs would be datasheets that includes (a) schematic, (b) bill of materials and (c) PCB overview.

If done well, such PCBs might become ubiquitous in engineering programs around the world.

## Venture Opportunity

As a disposable product, the small PCBs should be priced economically, well branded and accompanied with helpful documentation.

PCB manufacturing services such as SeeedStudio and JLC PCB allow printed circuit boards to be manufactured very inexpensively.

The domain [miniPCB.com](http://miniPCB.com) has been secured.

It is typical for the identity and contact information of relevant faculty to be available on school websites.

Many universities may require our company to be setup as an approved vendor.

As a commercial venture, value would be created by offering (a) useful products, (b) helpful documentation, (c) easy purchasing, and (d) responsive customer service.

As a career venture, value would be created by publicly demonstrating engineering and entrepreneurial competency, and inspiring future generations of engineers.

## Conclusion

Doesn't cost much. Worth a try.