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## Who Owns the IP in Electronics Design?

Is your electronics design easy to copy? Reverse engineering is not uncommon, especially with consumer electronics. In fact, it's perfectly legal in some jurisdictions. Whether you're an early-stage inventor or an engineer at an established company, protecting your intellectual property (IP) is paramount. That includes your schematics, printed circuit board (PCB) layouts, and software.

### How to Protect IP

Most businesses have some form of IP. There are two main ways to protect it.

- Keep it a secret.
- Patent it.

Keeping your IP secret is a safe approach, but complete secrecy is probably impractical. Unless you plan to make the product yourself, you'll need to share details with an electronic contract manufacturer (ECM). Plus, you'll eventually sell your product to customers, some of whom are competitors. Don't be surprised if they take your product apart to see how it's made and how it works.

Patents provide legal protection, but they can cost tens of thousands of dollars to obtain. They're also time-limited. For example, a U.S. patent is valid for only 20 years. And you'll still need to work with an electronic contract manufacturer. If an ECM enhances your existing design, do they own the IP for the improvements? For that matter, will they own any patents?

### Secrets, Patents and Z-AXIS

Z-AXIS treats customers' secrets like our own. We've been protecting them for 30 years, right along with the IP that we've developed for our own business. At Z-AXIS, we believe you deserve to keep the work you paid us to do on your design. Whether it's source code for software, Gerber files, or sourcing information about parts we buy for your project, it's your IP.

Plus, Z-AXIS is willing to leverage our own IP on your behalf. For example, let's say you're designing a laboratory instrument that requires printed circuit board assembly (PCBA) with surface-mount components (SMT). Because Z-AXIS provides both [electronics design](#) and [electronics manufacturing](#) services, we can apply our IP in stencil design to ensure accurate and efficient soldering.

When it comes to U.S. patents, Z-AXIS has a track record that's clear. [Michael Allen](#), the president and co-owner of Z-AXIS and its Bear Power Supplies business unit, was named on 32 patents from November 30, 1999, to March 3, 2026. He owns only one of those patents, through Bear Power Supplies. The other 31 patents are owned by our customers.

### Z-AXIS vs. Electronic Design Houses



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What's the reason for our approach? At Z-AXIS, our goal in design engineering is to provide work for our manufacturing department. Our design engineers are highly skilled, but they're not a profit center. Our focus is on making money from manufacturing, and not from one-time engineering charges that prepare a design for production.

This helps our customers in ways you might not expect. Because our design engineers aren't supposed to be profitable, they don't cut corners to control costs. Compare that to what you might get from an electronic design house. Their business model depends on minimizing engineering hours, so they're incentivized to put as little labor into your design as possible. What corners will they cut?

There's another aspect to this as well: design for manufacturability (DFM). Design houses say they provide DFM services, but where's their incentive to design your product so that it's as inexpensive as possible to manufacture? They don't make their money from manufacturing, a capability they don't have, and they probably won't risk-mitigate your design by identifying alternate parts like Z-AXIS does.

### **Z-AXIS vs. Other ECMs**

Years ago, an electronics contract manufacturer that built boards for an automation company went out of business. Before closing its doors, the ECM asked if the customer wanted to buy the IP that was used to make its boards. Why did the automation company, a major global player, allow itself to be put in this position? And what choice did it have than to buy the IP from the ECM?

Unfortunately, IP issues like this aren't isolated. Here's another example. At Z-AXIS, we speak with companies that would like to use us as a second source. When we ask them to share their design files, they're afraid to do so. It wasn't anything we said or did. Rather, our potential customer's IP is held by their current ECM. And there's a risk of upsetting a sole-source supplier like this.

Z-AXIS serves entrepreneurs with back-of-the-napkin sketches, inventors who hold patents, and major multinationals with mature product lines. We also work with companies that have purchased a U.S. patent and need help bringing it life. All ECMs aren't the same, so pick a partner that lets you keep your IP – and that provides electronics design and manufacturing services all under one roof.