



Size matters: Finding your ideal contract manufacturer

(blog series)

Nicolas Avril – [Enging.net](https://enging.net) – Blog 06 – April 2024

As they grow, many hardware companies find themselves needing to outsource parts or assemblies. I would argue that the choice of their Contract Manufacturer (CM) is critical to the health of the whole company. It is as much a strategic choice as it is a sourcing decision.

What should they look at? Where should they search? What do they need to know? This blog series will shed some light on these, one factor at a time.

This first episode dives into the importance of size.

The CM size and the needs of the hardware company (a combination of the number of units and of the complexity of the part / assembly (which we will call “volume”)) must be a good fit.

Think of it as the optimum size of an aquarium for the special type of fish you will place inside. Too big a tank and your fish becomes invisible. In the worst case, it gets ignored, dies, and nobody notices. Too small a tank and the fish cannot grow, run in circles, and misses out on the stimulation that could come from a varied and interesting environment.

Two things need to be kept in mind:

-1- We are not talking about your volumes in 3 to 5 years (although that is also a point of consideration) but about your current needs.

-2- You need to look at how big your confirmed orders are with respect to the factory you are talking to (where the technical people you are talking to are going to work) and not the total size of the CM.

There are many large and small EMS doing quality work on our planet. I have personally visited or audited a few of them and I can assure you that there is no need to settle for a less than optimum choice.

There are the family businesses, that manage a single site with two to five SMT lines relying a lot on manual labor. They can handle very small volume and perform a lot of final inspection to deliver the right quality product. They are often fast but have limited experience and resources.

On the other end of the spectrum, large (often publicly traded) multinationals manage multiple sites, and can provide design, prototyping, testing, and production in large volume, not only electronics but also plastic parts, metal parts, etc.). These companies rely on process control as well as testing to deliver thousands or millions of high-quality parts to their customers. Some company names have become household names, but other (such as [Kaifa](#) whose factories I have visited many times) seldom make the news but are no less impressive in their scale and capabilities.

Of course, if you are growing fast, the right CM for today may not be ideal in two years. But needing production volumes more than an order of magnitude higher than today in two years requires an annual growth of over 40% every year. Many other processes will have to adapt as this happens. And I would suggest you to only worry about crossing that bridge as you near it.

That is all for today on the importance of size when selecting a manufacturing partner. The next blog will focus on **location**. In the meantime, I am looking forward to your comments.

Information and disclaimer: This article is based on the work I have delivered as manufacturing and NPI advisor (through [Enging](#)), as industrialization expert and teacher ([S2Xpeed](#) accelerator), and as business development director ([Kaifa Technology Co.](#))