OFFSHORE ELECTRONICS

WHITE PAPER

STANDING AT THE CROSSROADS: MAKE OR BUY?

Offshore Electronics Limited

Guelles Lane, St Peter Port, Guernsey, Channel Islands, GY1 2RA

T: +44 (0)1481 712721 F: +44 (0)1481 710094
E: team@offshore-electronics.co.uk

LLOYD'S REGISTER • LRQA
ISO 9001

Guernsey Company Registration: 23036

When an electronics manufacturer needs to ramp up production, they face a choice: expand in-house production or outsource it to a reputable electronics sub-contractor.

Everybody has a set of odd jobs that need doing around the home, but what do you do when something big presents itself – such as your car breaking down?

If you're reasonably handy, you'll fix it yourself and save the cost of a mechanic. But by the time you've been to the shop for the parts, spent longer than you expected on the job and cleaned up afterwards, you begin to wonder if you made the right decision.

There will come a time – perhaps it has already arrived – when production is flat out, and a new order comes in. The manufacturer is then faced with a 'crossroads' moment: make or buy? In other words, should they further expand in-house production, or outsource to a reputable sub-contractor.

According to the Institute of Manufacturing (IfM) at Cambridge University, getting this decision right is crucial to the future of a business.

> "Make-or-buy decisions are often made reactively and purely on the basis of cost," said the IfM. "This reactive 'mode' does not allow people to review other relevant factors. Decision-making based purely on the basis of cost can be risky. By using a structured process to review all relevant factors, in an objective manner, the likelihood of making expensive mistakes is reduced."

At Offshore Electronics, we have found that, when making this type of decision, companies often only look at the cost of materials. They overlook the fact that investments have to be made in factory space, machinery, and extra staff.

Letting go can be hard. For a company that is self sufficient and has intimate knowledge of its products – the notion of handing it over to somebody else can be daunting. Yet it makes sense in so many ways.

Resource efficiency

Firstly, there is the use of resources. An electronics start-up will typically have the majority of its expertise in design and the market they operate in. The value of the company lies in its skilled staff and the Intellectual Property (IP) that they have helped to generate.

If anything, a good sub-contractor will enhance a company's reputation, because it is focused purely on manufacturing: it will have the specialist staff and machinery, manufacturing capacity, buying power and – crucially – expertise in compliance to ensure that the final product is top class.

Of course, with valuable IP there is always the fear of patents being ripped off. However, by choosing a reputable sub-contractor who respects non-disclosure agreements, this fear is unfounded. Using a company like Offshore Electronics has an added layer of security because we are based in the highly regulated jurisdiction of Guernsey in the Channel Islands.

This makes us accountable to our customers – and so helps us to generate trust. Offshore Electronics is a pure contract electronics manufacturer (CEM). We have no products of our own, so are dedicated to making other people's as their manufacturing partner. Most of our customers are based in the UK, though may have foreign subsidiaries. Our 60 employees are trained and qualified to IPC 610 Class 3.

We work in the fields of industrial and scientific machinery – such as industrial controllers and medical equipment. The products that we manufacture are generally highly complex ones that require testing.

Ideal for SMEs

CEMs are perceived as being for large companies, but this is far from the truth. We work closely with many small and medium enterprises (SMEs) to help them get their products into the market.

In fact, SMEs are often more likely to benefit from the services of a CEM – which can lend credibility to small electronics producers. If they are working in a small facility, making products by hand, they may not be getting the repeatability and product quality needed. They may also be too small to handle the necessary ISO accreditations, or meet the compliance rules for the European Union. (Despite Brexit, these will still be required in order to sell products into the EU.)

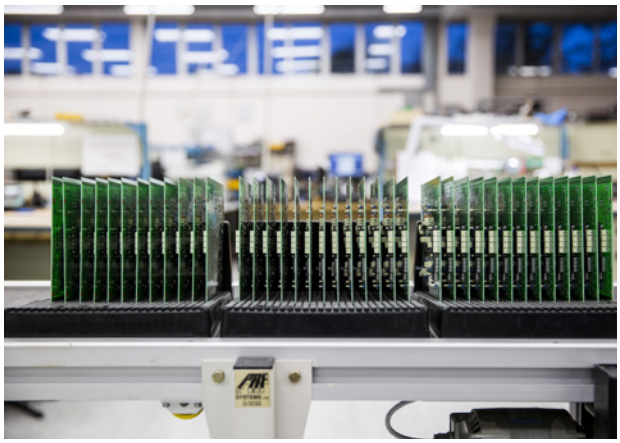
Regulations are becoming more of a challenge, especially for small, design-led companies. Because a CEM like Offshore Electronics has economies of scale, we can handle all this – and more. This includes everything from buying components, assembling the products, testing and shipping the final product.

Compliance is a huge learning curve, and achieving an ISO-approved facility takes a lot of time and money. We should know – because we have one. As well as having the necessary processes in place – and these must be audited regularly, following a strict set of guidelines – there is the question of assuring that the final product is of acceptable quality. At Offshore Electronics, we work to IPC 610 Class 3 – considered the 'gold standard' of electronics assembly.

Manufacturing scale

Electronics manufacturing – and the machinery needed to achieve it – tends to work on a huge scale. A company buying, for example, a surface mount machine, would be unlikely to use its full capacity. A far better idea would be to sub-contract out that portion of work to a CEM who has that capacity.

We recently invested more than £500,000 to expand our capabilities, including a new surface mount production line – with screen printer, precision placement machines and reflow oven – that is capable of up to 56,000 placements per hour. The new line complements two existing lines, giving us huge overall production capacity – which is used to make products for a diversity of clients.



In many cases, we help SMEs to replicate the manufacturing model of companies like Apple: design the product, and then sell it. The specialist job in the middle – the manufacturing – is contracted out. Apple's strategy is to concentrate on what they are good at, and leave the rest to specialists. This principle can also work for SMEs – with help from somebody like us.

And a good sub-contractor does more than just 'follow orders'. As a CEM, we are often presented with printed circuit board (PCB) layouts that are over-engineered, expensive and difficult to produce. So, we offer a prototyping service that helps designers remove complexity and cost from a project. Many times, we've helped a customer to redesign a product so that it is cost efficient to manufacture. As well as minimising costs, this can speed up manufacturing and improve product reliability.

Make the choice

Considering all the factors, such as resources, investment and compliance, it makes sense – when production reaches a certain level – to sub-contract electronics manufacturing to a CEM.

At Offshore Electronics, we have spent time building up the necessary expertise – and resources – to carry out electronics assembly and test the final products to a high standard. We believe that sub-contracting is of genuine benefit, and we work hard to help companies with all their needs. We're confident that, after a short trip to Guernsey to see our facility, you'll be ready to trust us on a long-term basis.

Perhaps the last word, though, should go to the Institute for Manufacturing, which says simply: "A good make or buy decision process is the cornerstone of a sound business."

About Offshore Electronics

Offshore Electronics is a leading CEM company providing complete and cost effective contract electronics engineering solutions for any outsourced electronic manufacturing requirements. Offshore Electronics works in partnership with customers in a broad range of industries, ranging in size from SMEs to major corporates. The company provides a complete service, from design for manufacture to prototypes, through to electronics and electro-mechanical production and assembly, test and quality control, to customised packaging and delivery.