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## Maximizing Efficiency, Reducing Risk: How Outsourcing Advanced Electronics Design & Development Can Benefit your Product Strategy

Advanced electronics product development is a complex process, which involves the use of advanced software and hardware tools. Being one of the fastest paced landscapes and on a global scale, advanced electronic products are constantly evolving. The current state of advanced electronics design is leading to more companies outsourcing this product stage as it becomes more costly, time-consuming, specialised and increasingly difficult to deal with the market volatility of component shortages.

Outsourcing this critical phase of product development allows businesses to save time, money and resources while still delivering high-quality products. This approach not only reduces the workload of often overloaded in-house teams but also provides access to specialized expertise and helps to streamline the product development process. In this blog, we'll explore how outsourcing advanced electronics design can benefit your business, as well as some of the key factors to consider when choosing an outsourcing partner.

Whether you're a product startup or an established business, outsourcing can help you stay competitive and ensure that your products meet the highest standards of quality and performance. So, if you're looking for ways to boost efficiency and save costs, read on to learn more about how outsourcing can help you achieve these goals.

### Benefits of Outsourcing Advanced Electronics Design

Outsourcing advanced electronics design can provide several benefits to businesses. One of the most significant advantages is access to specialized expertise. Advanced electronics contract manufacturers (CMs) typically have a team of experienced product designers and engineers who are well-versed in the latest technologies and design trends. Specifically, the ability to connect with long-term suppliers and create solutions at the design stage to effectively manage the current global component shortage. CM product designers and engineers have the skills and knowledge to tackle complex design challenges, providing businesses with innovative solutions that they may not have been able to achieve in-house.

Another advantage of outsourcing is the ability to save time and resources. Developing advanced electronics designs requires a significant investment of time, money, and resources. Outsourcing this task allows businesses to focus on their core competencies, such as marketing and sales, while the CM handles the design process. This can help to reduce the workload of in-house teams, allowing them to be more productive and efficient.

Finally, outsourcing can help businesses to stay up-to-date with the latest technology trends. CMs invest heavily in research and development, ensuring that they stay ahead of the curve when it comes to new technologies and design trends. By partnering with a CM, businesses can access this expertise without having to invest in the same level of research and development themselves.

### Challenges of In-house Advanced Electronics Design & Development

While in-house electronics design & development can be a viable option for some businesses, it also comes with several challenges. One of the most significant challenges is the need to invest in specialized equipment and software. Developing advanced electronics designs requires specialized tools and software that can be expensive to purchase and maintain. In addition, businesses must invest in training and development to ensure that their employees have the skills and knowledge to use these tools effectively.

Another challenge of in-house electronics design is the need to stay up-to-date with the latest technologies and design trends. This requires a significant investment of time and resources, including research and development. Businesses that fail to invest in these areas may find themselves falling behind the competition, with inferior products that do not meet the latest standards of quality and performance.

Finally, in-house electronics design can be time-consuming and resource-intensive. Developing advanced electronics designs requires a significant investment of time, money, and resources. This can take away from other critical aspects of business operations, such as marketing and sales.

### **The Process of Outsourcing Advanced Electronics Design & Development**

Outsourcing advanced electronics design & development typically involves several stages. The first stage is the initial consultation and discovery, during which the CM and the client discuss the project's scope, goals, and timeline. This stage is critical as it helps to ensure that both parties have a clear understanding of the project's requirements and expectations. You can read more about the discovery stage [here](#).

The next stage is the design phase, during which the CM develops the advanced electronics design. This phase typically involves several iterations, with the CM working closely with the client to ensure that the design meets their needs and expectations.

Once the design is finalized, the CM moves on to the prototyping and testing phase. This phase involves creating a physical prototype of the design and testing it to ensure that it meets the required standards of quality and performance. Finally, once the design is approved, the CM moves on to the production phase, during which the design is manufactured and delivered to the client.

### **Choosing the Right Outsourcing Partner**

Choosing the right outsourcing partner is critical to the success of the project. There are several factors to consider when partnering with a CM, including their experience, expertise, and track record of success.

One of the most important factors to consider is the CM's experience in advanced electronics design. Ideally, the company should have a team of experienced designers and engineers who specialize in this area, with a track record of success in delivering high-quality, innovative designs.

Another important factor to consider is the CM's expertise in the latest technologies and design trends. The company should be up-to-date with the latest advances in electronics design, including emerging technologies and design trends. Finally, the CM's track record of success is crucial. Businesses should look for CMs that have a proven track record of delivering high-quality designs on time, within budget and, importantly, suitable for manufacturing.

### **Maximizing Efficiency through Outsourcing**

Outsourcing advanced electronics design can help businesses to maximize efficiency in several ways. One of the most significant benefits is the ability to free up in-house resources, allowing them to focus on other critical aspects of business operations such as marketing and sales. This can help to improve productivity and efficiency, as in-house teams can focus on their core competencies.

Another way that outsourcing can help to maximize efficiency is by providing access to specialized expertise. CMs typically have a team of experienced designers and engineers who are well-versed in the latest technologies and design trends. This expertise can help businesses to develop innovative designs quickly and efficiently, reducing the time and resources required for the design process.

Finally, outsourcing can help businesses to stay up-to-date with the latest technology trends. CMs invest heavily in research and development, ensuring that they stay ahead of the curve when it comes to new technologies and design trends. By partnering with a CM, businesses can access this expertise without having to invest in the same level of research and development themselves.

### Cost Savings through Outsourcing

Outsourcing advanced electronics design can also provide significant cost savings for businesses. Developing advanced electronics designs in-house requires a significant investment of time, money, and resources. Outsourcing this task allows businesses to save on these costs, as the CM handles the design process. This can help to reduce the workload of in-house teams, allowing them to be more productive and efficient.

Another way that outsourcing can help to save costs is by providing access to specialized equipment and software. Developing advanced electronics designs requires specialized tools and software that can be expensive to purchase and maintain. By outsourcing this task, businesses can access these tools and software without the need to invest in them themselves.

Finally, outsourcing can help businesses to avoid costly mistakes. Developing advanced electronics designs requires a significant investment of time, money, and resources. Mistakes can be costly, both in terms of time and money. By partnering with a CM, businesses can reduce the risk of costly mistakes, as the CM has the expertise and experience to handle the design process efficiently and effectively.

### Quality Control in Outsourcing

Maintaining quality control is critical when outsourcing advanced electronics design. Businesses should work closely with their outsourcing partner to ensure that the design meets their requirements and expectations. This involves setting clear goals and objectives at the outset of the project, providing regular feedback throughout the design process, and conducting thorough testing and quality control checks before approving the final design.

Quality control checks should be driven by the standards within a quality accreditation. Businesses should ensure that the partnering CM has suitable accreditations in place such as ISO9001, AS9100, ISO13485 and so on (read more about suitable accreditations [here](#)).

Another way to maintain quality control is by selecting an outsourcing partner with a proven track record of delivering high-quality designs on time and within budget. This can help to ensure that the design meets the required standards of quality and performance, reducing the risk of costly mistakes and rework.

### Case Studies of Successful Outsourcing in Electronics Design

There are several examples of businesses that have successfully outsourced advanced electronics design. One such example is Sommetrics, which has long relied on outsourcing Extel to develop its products. We have helped the company to stay ahead of the curve when it comes to new technologies, design trends and entering a heavily regulated market (see the case study [here](#)).

Another example is Mondo, which has also relied heavily on Extel to develop its next generation energy product. We have helped the company to develop innovative designs, reducing the time and resources required for the design process, leading to the ability to remove reworks and improve manufacturing and supply times (see the Mondo story [here](#)).

### Is Outsourcing Right for Your Business?

Outsourcing advanced electronics design can provide several benefits to businesses, including access to specialized expertise, cost savings, and improved efficiency. However, outsourcing also comes with several challenges, including the need to choose the right outsourcing partner and maintain quality control.

Ultimately, whether outsourcing is right for your business depends on your specific needs and requirements. Businesses that require specialized expertise or that need to save on time and resources may find outsourcing to be a viable option. Also, businesses that require tight control over the design process or that have unique design requirements may be better served by taking a hybrid approach by developing designs in-house with the support of a specialized CM design and engineering team to guide and validate key aspects of the product and process.



Regardless of which approach you choose, it is essential to carefully consider your options and to work with a partner that has the skills, experience, and expertise to deliver high-quality designs that meet your requirements, expectations and get your products to market on time! With the right partner and approach, outsourcing can help businesses to stay competitive and to deliver high-quality products that meet your regulatory needs and the highest standards of quality and performance.

**More information.**

For more information on how we can help you ensure your device design and manufacturing meet your needs, please contact our USA or Australian offices.

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