A simplified path to hardware innovation for companies developing software applications

Delivering your software applications on validated hardware can help your customers get the most out of your application. But leveraging a hardware platform can also be a distraction from your core business. Choosing the best approach for your company to source, validate, build and support hardware platforms can make all the difference, in terms of cost efficiency and reinvestment of focus, as your company develops its intellectual property (IP).

Table of contents

EXECUTIVE SUMMARY

You're in the business of developing game-changing applications and getting that IP to market. Anything that interferes with that core purpose is a distraction and drag on resources at best, and a drain on profitability at worst. At the same time, a fine-tuned hardware platform or appliance is key for your customers' experiences, the lack of which raises its own set of performance challenges that impact support costs.

Even though you may recognize the broader business value of delivering and selling your application on a plug-and-play solution, you might be evaluating the infrastructure needed to support that vehicle. It's more than a simple matter of buying and reselling systems; it's a lifecycle commitment that brings with it important considerations. Before deciding the best approach to delivering your application on a hardware platform, ask yourself a few key questions to help decide the right path forward:

- **System design and integration**. Are you ready to take on the cost of setting up the infrastructure required to make hardware a core part of your business, including designing, validating and building customized solutions, if necessary? What would that mean for time to market? Do you have staff that can take on this responsibility?

- **Supply chain and logistics**. Will managing the hardware supply chain strain company resources? Does your shipping and receiving operation have adequate capacity and resources to take on this workload? Would holding hardware inventory on the books produce a drag on your margins?

- **Lifecycle and support services**. How will you provide the resources for on-site and remote hardware support in every geographic region where you do business? How about those you might grow into? Do you have a network of replacement depots to serve all those areas and, if not, how will you meet critical replacement needs rapidly?

Rather than bringing hardware in-house or developing and suggesting reference architectures to customers, software companies can find a partner for all aspects of hardware outsourcing that can manage the entire product lifecycle, even as you grow into new markets.

Meeting full lifecycle hardware requirements...
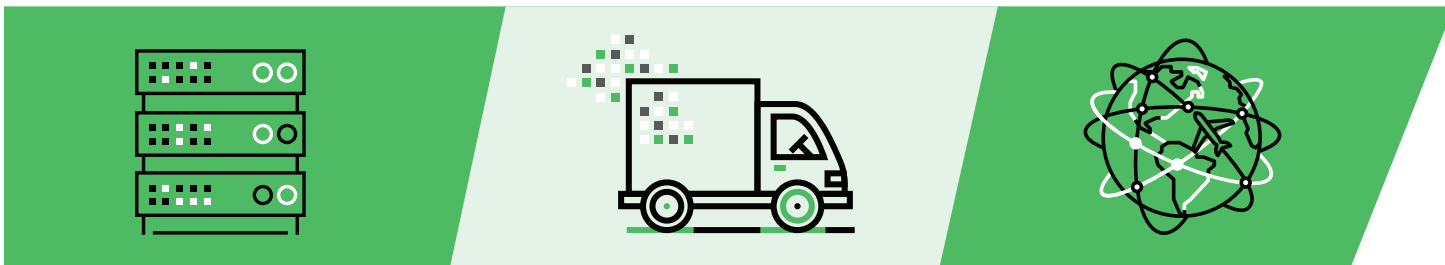
...in system design and integration...   ...supply chain & logistics...   ...and post-sale support.

HARDWARE AS A VEHICLE FOR PERFORMANCE-BUILT SOFTWARE APPLICATIONS

CONTROL OVERALL CUSTOMER EXPERIENCE

Delivering applications on tested and validated hardware platforms can be the difference between a successful implementation and a dissatisfied customer. Your company's brand is important, and the right hardware selection can help control the user experience your customers expect and trust.

PROVIDE OPTIMAL PERFORMANCE

When hardware is fine-tuned to your application, it helps ensure optimal performance. By pre-loading and configuring your solution before it reaches its destination, your customers are easily able to consume your application as a plug-and-play solution or appliance, which is a huge value-add. Plus, it can be the foundation for delivering a fantastic experience that leads to long-term customer loyalty and revenue streams.

While providing a fully integrated solution is key to customer experience, the road to delivery can come with many stops along the way, slowing down time to market and revenue. Adding hardware to your solution adds to its complexity, and doing so requires focus and resources throughout the lifecycle, from development, to deployment, to maintenance.
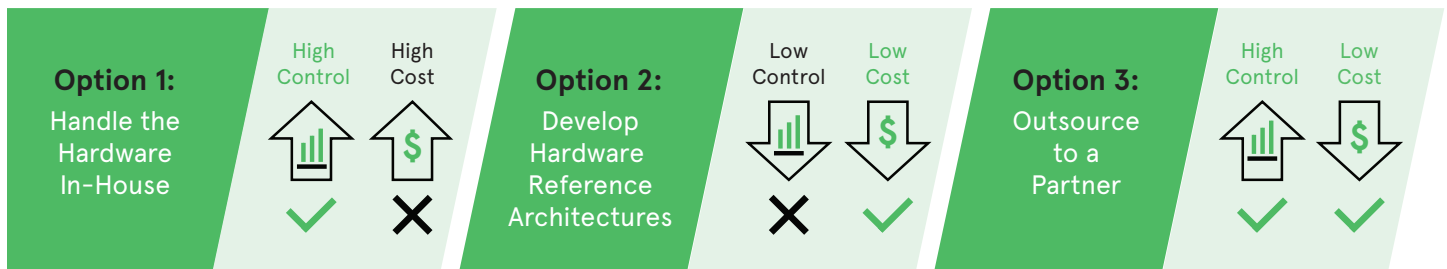
Designing, building, selling and supporting these complete solutions requires expertise you might not have in-house, or it can be a distraction from further innovation around the intellectual property that differentiates you in the market. Moreover, if you leave it up to your customers to select the hardware and it isn't optimal for your application, it could not only hinder the full potential and user experience, but can also slow down time to revenue as they try and solve for the right hardware. There are many things for companies to consider when turning to hardware as a delivery vehicle for software:

- **Taking away focus from core software IP** to identify the right hardware technologies, validate the full stack and maintain a roadmap to keep the platform optimized.

- **More complex business needs and supply chains**, which can slow time to market, consume additional resources and distract from core competencies.

- **Challenges to financials** while investing in infrastructure to support hardware solutions and the possible reduction on margins of the combined hardware-software transaction.

- **Dedicated resources to provide product lifecycle support** for field-deployed hardware across geographic regions, to meet service levels required by customers and boost customer loyalty.

Adding hardware to your solutions may bring with it a few things to think about from a business perspective, but it is also an essential piece for truly differentiating your software IP, offering a seamless user experience.

THREE WAYS TO DELIVER APPLICATIONS ON HARDWARE PLATFORMS

To incorporate hardware into your software applications and deliver a complete solution for your customers, you have a handful of common approaches to choose from:

Option 1: Handle the Hardware In-House	High Control ✓	High Cost ✗	Option 2: Develop Hardware Reference Architectures	Low Control ✗	Low Cost ✓	Option 3: Outsource to a Partner	High Control ✓	Low Cost ✓

Three common options for software providers to source and deliver hardware for their solutions.

OPTION 1: HANDLE THE HARDWARE IN-HOUSE

This option might look straightforward—taking on the role of a hardware OEM for your solution. It offers you a high degree of control over the hardware that the application executes on, which helps to ensure that the application performs as expected.

On the other hand, as described above, creating an internal hardware organization comes with its own set of challenges that can impact business resources and financials. It could also mean adding headcount, which amounts to overhead that takes away from your core intellectual property. In addition, keeping hardware on the books could impact overall financial performance.

OPTION 2: DEVELOP REFERENCE ARCHITECTURES

This option involves developing and recommending a hardware stack for customers to use for application delivery. It reduces costs for your company, because you don't need to sell or support the hardware, but still requires hardware expertise to develop the reference architecture to start.

Moreover, customers may or may not base their implementations on the reference architecture, so the solution control in Option 1 is not guaranteed in this model. As a result, hardware not aligned to drive the full potential of your software could pose a risk to performance, stability and security—all impacting the user experience and driving up support costs.

OPTION 3: OUTSOURCE TO A PARTNER

This option strikes a balance between cost and control. A hardware outsourcing partner takes on all aspects of the hardware, from system design and integration, to supply chain, to post-implementation support and services. This approach gives you full control over the hardware design without having to dedicate resources to it that could be better utilized on further innovation of your IP.

In addition to optimizing both control over the hardware platform and the cost of doing so, outsourcing the hardware to a partner frees you up to focus on creating additional value that you can deliver with your products. If you pick the partner with the right capabilities, you can benefit from existing expertise, global infrastructure and relationships within the industry. This could get you visibility into product and technology roadmaps that prepare you to take early advantage of future technologies for your solution.

WORKING WITH AN END-TO-END HARDWARE OUTSOURCING PARTNER

A full-service hardware outsourcing model can enable you to sell hardware in conjunction with your software IP while making that process transparent to your operations. You and your customers both benefit from a model that offers the option to deliver your application on a turnkey platform, while speeding time to market with a partner to handle the hardware. Depending on the engagement, you can choose a low-touch or even no-touch way of transacting the hardware, getting your software IP efficiently to market with an optimized full-stack solution.

With the hardware handled, you avoid costs and complexity while getting full control over the turnkey platform your customers receive to achieve an optimal user experience. That means you deliver smooth implementation and the best results possible in your customers' environments. What's more, with a partner to handle the hardware transaction directly with those customers or your channel partners, you no longer have the hardware sitting on your books, and can improve return on working capital and even boost margins by decoupling the software and hardware sale.

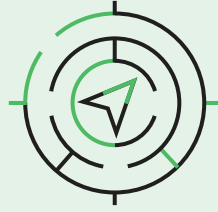### BUSINESS BENEFITS OF HARDWARE OUTSOURCING

Outsourcing bolsters customer success across a broad spectrum of industries and applications as diverse as network security, media and entertainment, enterprise storage and networking/communications. No matter the industry, outsourcing hardware can bring significant financial, operational and strategic benefits to your team.

- **Boost financial performance**. From optimizing the supply chain to handling customer financing, an outsourcing model helps you meet financial key performance indicators such as reducing inventory liabilities, shortening cash-to-cash cycles and limiting investments in non-core activities.

- **Enhance operational efficiencies**. A key part of the competitive advantage that hardware outsourcing delivers to your company is being able to outsource operational elements such as a custom branded web portal for your solutions and transactions. This online portal could support your field team, or even provide self-service access for your customers to explore, configure and purchase your validated solutions or appliances with click-to-accept terms and conditions and end user license agreements.

- **Reduce support costs**. In addition to design, integration and supply chain efficiencies, outsourcing also provides the complementary services your customers want and expect from a first-tier provider to round out the implementation experience. These include everything they look for expertise on, such as installation, warranties, maintenance and even data migrations.
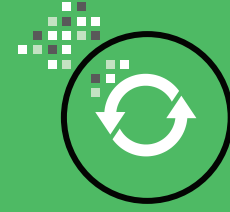
Delivering concrete business benefits...

...boosting financial performance...   ...enhancing operational efficiencies...   ...and reducing support costs.

NEXT STEPS: HOW TO CHOOSE A HARDWARE OUTSOURCING PARTNER

Once you have decided to forge a relationship with a hardware outsourcing partner, it's time to evaluate your options. Choosing the right partner helps you navigate the complexity of hardware, allowing your company to focus on innovation around its core purpose: creating game-changing software.

A CHECKLIST FOR CHOOSING A HARDWARE OUTSOURCING PARTNER

Choosing a partner to act as a solution infrastructure extension of your team is the beginning of a long-term relationship. This list of questions outlines considerations that should factor into your decision:

☐ **DESIGN EXPERTISE**: Can this potential partner recommend, design and engineer solutions that meet all my customers' current and future requirements? Can it help me with long-term product roadmaps, including forward-looking insights from its own strategic partners?

☐ **SCALABLE INTEGRATION AND MANUFACTURING:** Does this company offer flexible production and scalable integration and testing services, backed up by expertise in technologies built for the data center? As a partner, can it help me navigate integration both locally and globally as I expand into new markets? What about global logistics and trade compliance?

☐ **POST-SALE SUPPORT:** Does this provider have global experts and resources for product support and customer service, so that I can partner with them rather than invest in expensive global infrastructure?

☐ **FINANCIAL PERFORMANCE:** Can this partner enable me to minimize transacting hardware, eliminating potential drag on margins? Can they improve my bottom line by reducing investments in hardware supply chain management, integration and servicing?

A SIMPLER PATH TO MARKET: AVNET DIRECT CONNECT

Through Avnet Direct Connect, you can team up with Avnet as your end-to-end hardware outsourcing partner. Avnet Direct Connect is a financial service that further extends how a partner could handle the entire scope of hardware for companies developing software applications. It starts with system design, solution integration, supply chain management and inventory programs—all the way to post-sale support through global lifecycle services including field installation and maintenance.

And with Avnet Direct Connect, the end user transaction, including credit, is handled by Avnet Integrated for the hardware or complete solution (software and hardware). Partnering with Avnet Integrated can help your company be more agile and cost effective while enabling you to focus operations on further development of IP for your customers.

SPEED TIME TO REVENUE

Avnet Integrated engineers help design and produce the systems that your application will run best on, simplifying your solution development process to get it to market faster. Because offering plug-and-play solutions also dramatically simplifies implementation for your customers, the sales cycle can move forward more quickly, improving cash-to-cash time. Whether you need well-chosen off-the-shelf, modified off-the-shelf or a fully custom system, your IP will shine on a validated and tested solution that can be built and delivered, globally.

Speed Time to Revenue

- **Shorten the sales cycle** with plug-and-play solutions for faster cash-to-cash
- **Stay ahead of the curve** with early adoption of new technologies
- **Scale efficiently** into new markets with instant global infrastructure and support

The time to market advantages of working with Avnet Integrated continue to work in your favor throughout the lifecycle of the solution offering. For example, Avnet's ecosystem of partnerships with leading manufacturers offer you visibility into product roadmaps and potential accessibility to design with future technologies. And when you're ready to expand into a new geography, we're ready to support your solution deployment with global infrastructure including integration, logistics and lifecycle services.

ENHANCE FINANCIAL EFFICIENCY

By enabling your company to focus on its core IP, the Avnet Direct Connect model increases your overall financial efficiency. It helps reduce the expenses associated with conventional OEM approaches to hardware distribution, such as engineering, integration and supply chain costs, which increases your return on working capital.

Enhance Financial Efficiency

- **Increase return on working capital** with more reinvested into your IP
- **Eliminate margin drag** by not transacting the hardware solution
- **Improve the bottom line** with savings on engineering, logistics and support costs

By removing the need to maintain hardware inventory you can free up more of that capital as well, eliminating the drag on margins that you would face from a warehouse full of hardware. Overall, you can reduce overhead for a healthier bottom line, taking advantage of Avnet's existing investments in engineering, logistics and support infrastructure, rather than investing in your own.

IMPROVE OPERATIONAL FOCUS

Avnet Integrated offers a unique, fully managed solution infrastructure model where you can consider all aspects, from design to delivery, handled—from supply chain management, solution integration and testing, to custom branding and packaging, to drop shipping to your customers and installing your solution. And with Avnet Direct Connect, we handle all the financial aspects of the sale, such as financing, taking on your customers' credit risk and click to accept terms and licensing agreements. We can also stand up a custom branded storefront for you, creating a seamless digital portal with custom view settings for solution configurations and pricing for customers to quote and purchase solutions directly.

Improve Operational Focus

- **Streamline the supply chain** to enhance profit margins and reduce risk
- **Target resrouces more effectively** on core competencies and solution innovation
- **Simplify the solution transaction process** with a customized B2B portal

With your hardware handled, you can devote resources to innovation on differentiated IP that will give you a competitive edge. And while you won't have to dilute your focus, you will also improve outcomes by offering optimized combinations of hardware and software that will help increase solution quality and customer satisfaction.

Avnet stands ready to help you reduce costs and increase efficiencies across your company, helping safeguard financial performance and maximize return on working capital. Plus, we do all that while reducing solution complexities, allowing your business to focus on what you do best. Imagine what markets you could access next with the hardware handled.

WANT TO KNOW MORE ABOUT AVNET INTEGRATED?
VISIT AVNET.COM/HARDWAREHANDLED TO GET STARTED.