



Do You Have a Safety Net in Manufacturing?



What's key to bringing innovative products to market in a cost-effective and timely manner?

Dominique Kwong, Director of Hardware and Manufacturing at Recon Instruments, shares his insights and recommendations.

In manufacturing, adhering to a product development timeline is critical. If your company has had to design, manufacture and deliver products that are ahead of the competition, you know that every step in the manufacturing process is time sensitive. In fact, engineers need to understand how to best streamline the process.

The “pain” point in manufacturing isn’t money, according to Dominique, it’s about time. “We need to find the quickest way possible to make up for any deficiencies in the front end development process so we can adhere to our schedule,” says Kwong. “The challenge is finding an electronics manufacturing services provider that can work within our demanding schedules.”

Back in 2008, Recon looked for a local EMS provider to help build initial prototypes and guide them through their first efforts at mass production. At that time, Recon was launching their Heads-up Display (HUD) system for the sports/speciality market and had partnered with Zeal Optics to design the Transcend ski goggles. What was critical to the plan was finding an EMS provider that could meet their needs.

What criteria should you use when choosing an EMS provider? Of most importance is determining the company’s equipment, skill and capabilities. “I assess an EMS provider by asking questions to find out if they are flexible and dynamic to design changes,” says Kwong. “I’m interested in knowing answers to questions such as; what are the capabilities of their equipment and staff? How do their processes and controls ensure product quality? Are they scalable to meet the ever

changing demands of production? Because at Recon, we are constantly pushing the integration envelope and we need to know if we’ve pushed too far.”

After exploring EMS options in the local marketplace in Vancouver, BC, Recon chose Dorigo Systems Ltd as their partner to manufacture the first prototypes.

“Dorigo provides complete flexibility when working with me,” says Kwong. “Over the years, they have educated me on the process and helped me with my planning by managing expectations and the minimum requirements needed to get the job done. We simply can’t do it all by ourselves and we trust Dorigo to get it done right.”

What does it mean to get the job done right? According to Kwong, it means that the success rate on a board is high. “In fact, my experience with Dorigo is that there are certain jobs I’d only trust Dorigo to do. When it comes to fine pitch assembly or rework, I simply wouldn’t trust the job to any other EMS provider. I won’t compromise on quality, and frankly, I don’t have to think about it anymore because Dorigo provides Recon with less than a 1% failure rate. It’s amazing.”

Dorigo has been working with Recon to not only assemble their prototypes but also augment their mass production phase using both consigned assembly and turn-key manufacturing. “When assessing the capabilities of an EMS provider, we wanted a company that could support the logistics of turnkey production but we also have the need to outsource consigned projects.”

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Design For Manufacturing (DFM) is an essential collaborative up-front process in designing new products. When a build package is presented to an EMS provider, questions can arise. The ideal EMS provider has the ability to identify potential problems before assembly. They are the experts in how to build boards most cost-effectively. Receiving push back up-front in



the manufacturing process benefits everyone and builds trust.

“Recon has a leading edge in technology,” says Kwong “and Dorigo has the capabilities to build the boards we design.” By including Dorigo in the early stages of development, Recon gained a partner in the production process. “Dorigo’s Process Engineers screen Recon’s designs for ease of manufacturing to ensure everybody is on the same page,” Kwong confidently states, “If you don’t include Design for Manufacturing up front, you pay the price down the road.”

Assessing an EMS providers’ terms and conditions

Top Five Questions to Ask When Choosing an EMS Provider:

1. What are the company’s equipment, skill and capabilities?
2. Is the EMS provider set up for both prototype and production volumes?
3. Can they support turnkey and consigned projects?
4. Do they offer flexible terms and conditions?
5. Can they provide you with a dedicated project manager?

About Recon Instruments

Recon Instruments is a world leader in Heads-up Display (HUD) technology for sports and activity-specific environments. Founded in 2008, Recon’s award winning multi-patent and patent-pending technology platform integrates a Heads-up Display with a state-of-the-art microcomputer and sensor suite. Recon’s HUDs run an operating system with an open SDK, to empower developers to create apps for an endless variety of sports, social and contextual cases. With worldwide distribution and partnerships with leading technology and optics companies, Recon continues to define and evolve the HUD category. For more information, visit www.reconinstruments.com.

and understanding premiums for having something done faster is another important question to ask. What is the plant’s volume flexibility in a month? Can they scale or contract? What are your options and the associated costs for change in plans? “If there is one thing for certain in manufacturing, change is inevitable,” says Kwong. “Working with an EMS provider that can scale upwards or downwards gives you distinct cost savings, and not every company can do this effectively.”

Kwong noted that while Dorigo is not the least expensive EMS provider in the local market, they are worth every penny. When Dorigo’s standard 10-day manufacturing lead-time is not fast enough, he’s very willing to pay their 25% premium for expedited 5-day assembly.

“I don’t have a problem paying a premium,” says Kwong, “Dorigo assembles 50% faster than our own manufacturing capabilities can handle, that translates into over a week’s worth of time savings! Who else can give me that solution? I trust their process and quality. Quite simply, Dorigo is everyone’s safety net.”

Finally, if an EMS provider can provide you with a dedicated project manager, it makes a difference over the long term. You do not have to constantly re-educate your contact and they become a true partner in the manufacturing process because they understand your company’s process, people and procedures. “You can’t do it all yourself,” says Kwong, “So you will need to find an EMS provider you can trust through every stage of the manufacturing process, even with extreme timelines.”

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