

# Design Engineering Partnerships at ControlTek

*“ControlTek is Sustained by the Enduring Partnerships Our Work Creates”*

## Introduction

Here at ControlTek, we have always believed the success of our organization is directly connected to the strong and lasting partnerships we have developed throughout our industry. In particular, the partnerships we form with other design and engineering groups, whose capabilities and expertise complement our own, ensure we can continue providing the expert knowledge and technical skill needed to take on ever-changing design challenges.

## A Complementary Skillset

For smaller engineering companies, ControlTek's broad skill set and integrated design and manufacturing capabilities are helpful and often necessary assets, especially for projects requiring multidisciplinary assistance. Our engineering approach includes many tools to help prepare products for successful production and testing. Once a design is complete, ControlTek's integrated manufacturing services make production simple.

Likewise, our electronics design team benefits from partnerships with outside designers. This includes adding resources to our own team when assistance is needed for firmware or software development, or working with outside partners who have expertise in mechanical or industrial design.

## Getting Started

Smaller design groups often choose to partner with ControlTek to provide capabilities they don't offer in-house, like test design or a Design for Manufacture Review. EMS test design and test development are core competencies at ControlTek. Our experienced staff, harnessing our investments in the latest test technologies, provide real benefits for smaller design agencies who may not have these resources as readily available.

## ControlTek's EMS Test Expertise Includes:

- **PC Based Systems** ControlTek's proprietary universal test equipment (C.U.T.E.) provides our partners with reliable, economical functional verification testing. Utilizing our in-house 3D printing capabilities, test engineers create functional test fixtures to simulate a device's operation and verify functionality.
- **Flying Probe** Using the SPEA 4040 Flying Probe, our test engineers can test components over a wide range of test requirements with a high level of accuracy.
- **Boundary Scan** A Boundary Scan reduces testing time and lowers overall costs by testing interconnects without the expense and complexity of a bed-of-nails fixture.
- **Environmental testing** Environmental testing is another capability that can provide real benefits for smaller design agencies. This includes temperature, vibration, and EMC compliance (emissions and susceptibility).

## Long-term Benefits of Partnering with ControlTek

For electrical engineers who choose to partner with ControlTek, our integrated manufacturing and testing capabilities, coupled with a positive working relationship, often result in long-term partnerships. Dave Amos, an electrical engineer who specializes in hardware and firmware development, knows firsthand just how valuable these partnerships can be. He has worked with ControlTek for over 15 years.

Amos was working with a company in Canada on a design project when he asked ControlTek to consult for an Engineering and Manufacturing review. He knew his client would benefit from early involvement and consultation on the actual production of their finished design. ControlTek's testing expertise made us a great asset to ensure the finished designs would function as anticipated.

Over the years, the relationship has evolved, becoming a mutually beneficial relationship built on trust and appreciation for each other's unique skill sets. On some projects, ControlTek provides an engineering and DFM review for Amos's clients. For others, ControlTek has contacted Amos to seek his expertise on behalf of clients with hardware and firmware needs.



“Over time, my partnership with ControlTek grew,” says Amos. “I felt comfortable knowing I could call ControlTek anytime throughout a project and speak with anyone on their Engineering team to discuss the project and get updates. That open communication is a big part of the company’s culture.”

ControlTek’s project management expertise is another huge plus for our design partners. Our expert team is able to keep large-scale projects running smoothly and to seamlessly coordinate design efforts.

Having access to ControlTek’s integrated design, manufacturing, and testing is a huge draw for independent designers. Integration creates opportunities for input from multiple disciplines which prepares projects for manufacturing and test early in the design process. This in turn creates excellent cost savings opportunities over the lifetime of a project.

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Ultimately, these relationships come down to the people involved. Our emphasis is on building trust and understanding of the unique benefits each group gains through project cooperation.

“If you want an honest, fair, and friendly company to work with,” Amos says, “ControlTek would be at the top of the list.”

To learn more about partnering with ControlTek, give us a call and we’ll connect you with one of our design or manufacturing experts.