



# BRINGING MOTOR CONTROL DESIGN TO LIFE

WINNING BUSINESS WITH FAST, ACCURATE, FULL SYSTEM SIMULATION AT ZT INNOVATIONS

## About the Customer

As a motor control consulting firm with more than 45 years of motor control and inverter design experience, ZT Innovations™ offers unmatched expertise in their field. They not only design algorithms but also the software and hardware platforms. ZT Innovations prides themselves on their passion for motor control design as well as the out-of-box solutions they provide for many industries including electric bikes, medical drills, drones, compressors, and more. Whether it is a new system design, optimizing existing components, or more complex nonlinear design scenarios, ZT Innovations will help you get your motor running.



We are confident that a simulation in PSIM realistically represents the actual system.”

Eric Thomas,  
Co-founder,  
ZT Innovations™

ZT Innovations™

## Their Challenge

Most of ZT Innovations' business comes from repeat customers and customer referrals, so their reputation for delivering high quality results in a short amount of time is extremely important to them. They found that many software tools on the market were lacking a complete solution for their needs. ZT Innovations employed multiple tools for different steps in the process, therefore each step happened sequentially, causing extended time to completion for their clients. The tools that they employed required significant simulation time to accurately represent the physical system.

## Our Solution

Altair® PSIM™, formerly Powersim, is known in the industry as a complete solution for simulation of motor controls, microgrids, and power supplies. For ZT Innovations, PSIM checked all the boxes. It allowed them to run a full system simulation in a single step, rather than the linear process they were used to, which in turn shortened their simulation time exponentially.

In addition to speeding up their time to completion, they are now able to offer a more complete solution, which adds value for their clients. The full system simulation capabilities allow them to be a full-service provider when it comes to their specialty, motor control design. Eric Thomas, Co-founder at ZT Innovations says, "We work with multidisciplinary systems, where electronics and control blocks are combined, and we are confident that a simulation in PSIM realistically represents the actual system."

## Results

"We went from physical testing and fine tuning on the bench to a more efficient and scientific process," says Co-founder Jorge Zambada. ZT Innovations is able to run a full system simulation in less than one minute of processing time. They also found significant time savings on the design side because of their ability to work within a single tool for each step in their process.

To learn more about ZT Innovations, please visit [ztinnovations.com](http://ztinnovations.com)



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