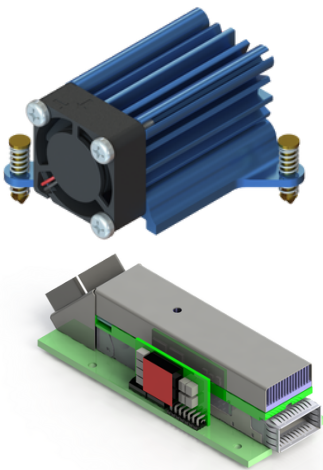


# Mechanical & Thermal Design

## High Speed, High Complexity

Fidus – With more than 20 years of experience, we have learned how to transform ideas, visions and concepts into exceptional products. That’s because we are experienced at taking complex problems and delivering solutions against dynamic environments and tight deadlines. We apply our industry experience, and leverage the expertise of our people to make sure your product performs to your expectations before it goes out the door. No exceptions.



### HOW WE HELP

Fidus offers specialized mechanical design capabilities directed at electronic product enclosures (indoors and outdoors), component and assembly design, thermal solutions, detailed IC thermal, AMD thermal partner, FEA analysis, production tooling, manufacturing solutions, and photo- realistic renderings.

Our mechanical design team’s skills are readily complemented by Fidus’ Hardware, Wireless, PCB Layout, Signal Integrity, FPGA/DSP, and Embedded Software expertise.

### DESIGN EXPERTISE

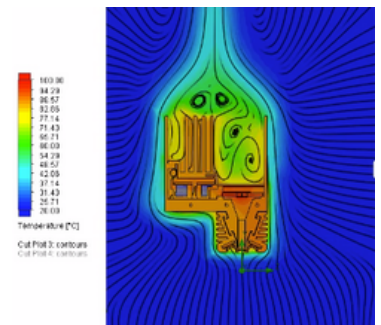
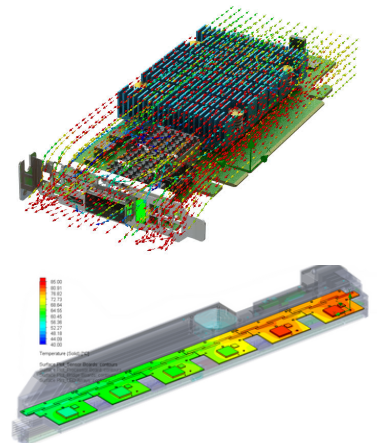
- Materials: Plastics, metals, resins, etc.
- Processes: Injection molding, bent metal, machining, casting, extruding
- Environments: Indoor, outdoor, pole mount, marine
- Thermal CFD/FEA: Convective and conductive solutions for steady state or time dependent thermal challenges
- Structural FEA: Designing for strength and minimal weight
- Circuit Board Modeling: Bidirectional seamless integration between PCB
- EMC Enclosures: Designs for both CISPR and FCC compliance (conducted and emitted)
- Concept-to-Production: Process knowledge and strategies to support customers from concept to prototype to volume

- Cabling/Connectorization: Ingress/egress for harsh environments
- Marketing Collateral: Photo real concept images

### TECHNOLOGIES

#### THERMAL SIMULATION TOOLS

- Simcenter Flotherm LT and XT : + FloPack for detailed IC modeling and characterization
- SolidWorks® Simulation: For thermal FEA, structural FEA, mechanisms and moving parts, and computational fluid dynamics



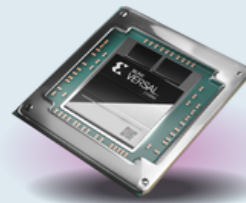


Adaptive  
Computing  
Partner

PREMIER

## Fidus - Premier AMD Adaptive Computing Partner

AMD enables smarter, connected, and differentiated systems, integrating the highest levels of software-based intelligence with hardware optimization and any-to-any connectivity. By invitation, Fidus became the Inaugural Premier Design Services Partner for AMD Adaptive Computing (formerly Xilinx). As a Premier Design Partner, Fidus receives exclusive training, certification, and early access to tools, IP and new silicon. With ever-increasing requirements for designers to conduct thermal simulations, Fidus provides you with access to thermal simulation tools and the required resources to run your specific thermal simulations. Ease your cost and support burden and leverage the expertise, experience and tools from Fidus.

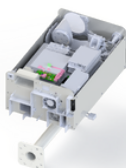


## ADDITIONAL EXAMPLES OF OUR WORK

### Optical & Imaging Equipment

Application: Ultrashort pulse laser (USPL)

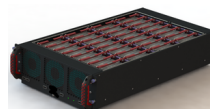
Effort: Housing and mounting bracket design, IP protection, optical alignment and active thermal solutions



### Machine Learning Computers

Application: Machine learning computer

Effort: Chassis design, card guides, thermals, busbars, support plates, handles, and EMI shielding.



### RF Equipment

Application: RF research lab equipment

Effort: Chassis design, thermal solution, EMI shielding



### Heat Sinks

Application: FPGA and DDR4 cooling

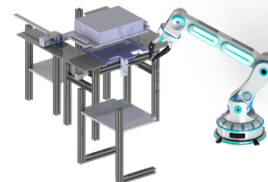
Effort: Skived heat sink design, TIM selection, and thermal simulations



### Automated Test Stations & Assembly Fixtures

Application: Automated PCB test station

Effort: Housing and chassis design, failed PCB marking mechanism, robotic arm feeding/removing PCB tray and feeding dolly design



# 20+

years experience

Collaborating with smart teams is what fuels us every day.

# 3,000+

successful projects

Your unique challenges are our obsession.

# 400+

customers

Extending your team with our expertise brings designs to market faster.

# 95%

repeat customers

Customers love to work with us, again and again.

## ABOUT FIDUS

Fidus Systems, founded in 2001, specializes in leading-edge electronic product development with offices in Ottawa and Waterloo, Ontario, and San Jose, California. Our hardware, software, FPGA, verification, wireless, mechanical and signal integrity teams work to innovate, design and deliver next-generation products for customers in emerging technology markets. Fueled by 20+ years' experience and creativity, along with our collaborative and process driven approach, we turn complex challenges into well-designed solutions. And with over 400 customers and 3000+ completed projects, we have the expertise to be a seamless extension of your team, providing a clear focus and commitment to getting designs and prototypes to market faster. Once you start working with us, you'll trust us like one of your own. Our hallmark is transparency. Our guiding principle is first time right.

# fidus

innovate • design • deliver

The Fidus name and the Fidus logo are trademarks of Fidus Systems Inc. Other registered and unregistered trademarks are the property of their respective owners.

©Copyright 2023 Fidus Systems Incorporated. All rights reserved. Information subject to change without notice.

fidus.com