Hardware Design

TAKE ADVANTAGE OF OUR HARDWARE DESIGN EXPERTISE — analog, digital, optical — we invest in and train on the world’s best hardware design tools. And for design bring-up and proving, our labs are outfitted with leading edge equipment to get your design done right, the first time.

Your teams are facing unique challenges, and we understand — too many projects and too few engineering resources. And that’s not all. Designing for your complex prototype or product requires deep technical knowledge as well as thoughtful consideration and planning. Bottom line, you need to meet your roadmap schedule, and with Fidus as an extension of your team, you will get there, and get it right the first time.

HOW WE HELP

Delivering solutions at the speed of your business.

After more than 20 years, 3,000 projects and 400 customers, we’ve learned how to transform your idea, vision or concept into the product you’ve imagined. That’s because we know how to take complex problems, and design and deliver them against dynamic environments and tight deadlines.

Your project needs the right team and the right toolset with a rigorous process to deliver on your capability and capacity challenges. At Fidus, we become a seamless extension of your team, with a clear focus and commitment to getting your design or prototype to market faster.

Our hardware design teams are equipped with an impressive breadth of knowledge paired with hands on experience — this ranges from simple, cost effective projects to high performance embedded systems with high reliability requirements. We deliver designs that frequently utilize the world’s largest FPGAs, complex microprocessors, 100Gbps ASSPs, high-end data converters, multiple high-speed memory interfaces and complex power sub-systems.

That’s not all! Our hardware design teams’ skills are well complemented by our PCB layout, FPGA/DSP, signal integrity, embedded software, and mechanical design expertise.

Extend your team — you choose how we work together.

Design projects have many elements, all of which are in your control when you work with Fidus. Do you want to hand off the whole project or just find a few people to supplement your staff? Looking for project management to keep you informed and the project on track? Our breadth of expertise, creative team structures, and flexible payment options allow a customized service that works for you:

- **Turnkey design services:** Plan and execute with our team for an end-to-end development solution, or choose anything in between to suit your requirements.
- **Staffing services:** Utilize a design expert at your virtual or physical location, for the length of your project, or for a targeted engagement.
DESIGN EXPERTISE

- Entire design cycle from system architecture to low-level design
- Complex designs combining analog, digital, RF, power
- 32Gbps+ designs built with robust signal integrity strategies
- FPGAs (CPLD, SoC, MPSoC, RFSoC), DSPs, microprocessors, discrete designs
- Low-power/battery applications, power sequencing
- High current, high voltage isolation from low voltage logic
- Embedded system design and development
- Simulation, optimization, and verification
- Timing budget calculations and analysis
- Component obsolescence and cost reduction analysis
- EMI, EMC, ESD, RoHS compliance
- Regulatory approval identification and design strategies

TOOLS FOR HIGH-END DEVELOPMENT

Design and Simulation: Cadence®, Mentor Graphics®, Altium®, Agilent ADS, ANSYS HFSS™, MATLAB® and Simulink®, LTSPICE®

Verification: Network Analyzers, Vector Signal Generator, Signal Analyzer, RF Signal Generators, Spectrum Analyzers, Electronic Loads, Four-channel high-speed oscilloscopes, Thermal Chamber, Logic Analyzer, Soldering Stations, Programming Pods, etc.

EXAMPLES OF OUR WORK

BRINGING YOU XILINX PREMIER

As Xilinx Premier, Fidus receives exclusive training, certification, and early-access to tools, IP, and new silicon. By invitation, Fidus was the inaugural Xilinx Premier Design Services member in North America. So what does this mean? It means that when you hire Fidus, you know that Fidus is on the forefront of Xilinx's roadmap, experienced in the most advanced tool flows, and is top of mind within the Xilinx support network.
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.

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DESIGN SOLUTIONS WITH FIDUS
Need prototype and product design help?
We’ll work with you to understand what you’re looking for, and we’ll dedicate the necessary resources to make sure it’s a success the first time. Come to us with just an idea or specific challenges that are keeping you up at night, and we’ll help you solve them.

Fueled by 20+ years’ experience, our expertise, and creativity, along with our collaborative and process driven approach, turns complex challenges into well-designed solutions, and we keep customers like you coming back, again and again:

1. We are committed to “first time right.”
2. Experience has taught us how to solve problems on any scale.
3. Faster time to market means faster time to benefit.
4. You choose how we work together.
5. Unique projects are our obsession.
6. We believe transparency builds trust.
7. Customer focus is our calling card.

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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.

82% repeat customers
Customers love to work with us, again and again.