

Electronic Product Development



Fidus - an excellent choice

At Fidus Systems, we understand the unique challenges faced by technology companies - too many projects and too few engineering resources. With top engineering talent, multiple design centers and on-site staffing options, highly Fidus provides responsive engineering teams that are an extension of your development team to successfully bring products to market faster.

Recognized as a trusted design partner, Fidus is dedicated to meeting customer expectations, and developing long-term relationships with clients built on integrity, quality and open communications.

Fidus is pleased to provide customers with full end-to-end development solutions or more selective targeted engagements.

Fidus has delivered more than 2000 projects for 300+ clients, from Tier-1 multinationals to SMEs to start-ups. Fidus is headquartered in Ottawa, Canada with local design centers in Kitchener-Waterloo and San Jose.

Corporate Profile

Electronic product development and consulting services

how we Help

We specialize in electronic product development and consulting services. Our diverse clientele spans all major industries.

We are **experts** in delivering **high-speed**, **high complexity** designs, involving hardware, FPGA/DSP, signal integrity, embedded software, PCB layout, wireless/RF, and mechanical design.

We have the in-house capabilities to deliver complete turn-key product designs, while maintaining the flexibility to engage in more niche roles. Tell us about your needs- big or small!

We offer solutions to:

- **Increase your revenue.** Our experts get your products to market, while empowering you to undertake parallel developments
- Accelerate your revenue. By getting your products to market faster
- Reduce your costs. Rely on our team and our state-of-the-art tools
- Increase your speed and flexibility. Quickly supplement your team with our group of experienced designers
- Focus on your core competency. By helping you maintain focus on your value offering while we fill in the rest. Rely on our design experience so that you can concentrate on your business.

business models to Fit your needs

- 1. Time and Materials hourly based billing
- 2. Fixed Price project/deliverable based
- 3. Royalties and Licensing creative compensation



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.

hardware fpga software wireless layout signal integrity mechanical



Hardware

- · Analog, digital, power design, simulation, bring-up, and debug
- Communication systems (e.g. 100G+, XFP, SFP+, CFP, etc.)
- Wireless (e.g. mm-wave, 2.4/5GHz, SDR, etc.)
- PCB Layout (e.g. 2 to 40+ layers, HDI, rigid/flex/rigid-flex, buried capacitance, etc.)
- Battery systems (e.g. Li-Polymer, Li-Ion, Pb-Acid, etc.)
- Embedded systems (e.g. consumer, storage systems (SSD), Aerospace/Defense, etc.)

FPGA

- Turnkey FPGA designs, device selection, device retargeting, ASIC-to-FPGA conversion
- Example technologies: Multi-gigabit serial links, DSP/Video processing, PCle, Ethernet, DDR3, hard/soft-core processors, ARM®, etc.
- Xilinx® advanced tool flows: Partial Reconfiguration, HLS, Isolation Design Flow, Zynq® AMP, SDSoC
- Timing closure and high-utilization issue resolution

Signal Integrity

- Pre- and post-route simulation up to 40+GHz, including high-speed interfaces (e.g. DDR4)
- Power integrity consulting for optimal decoupling
- Consulting to diagnose and correct signal integrity and/or emissions issues

Embedded Software

- Complete Embedded Systems containing 8/16/32-bit controllers and processors, including, ARM® (including Zynq®), PowerPC®, x86, MIPS, and FPGA soft-cores
- Embedded operating systems including Linux (SMP and AMP), eCos, VxWorks, OSE, FreeRTOS, RTX, ThreadX, $\mu\text{C}/\text{OS}$
- Boot loaders, board support packages (BSP) and drivers
- Misc: Simple User Interfaces, scripting (Tcl/Tk, Perl), LCD applications

Mechanical

- Full Chassis Design (including circuit board, and cabling/connector modeling)
- Structural and thermal Finite Element Analysis (FEA)

our Tools

At Fidus we believe that to deliver leading-edge products you need state-of-the-art tools. We maintain our own licenses for advanced development tools. Our team also has extensive design experience with an even larger spectrum of tools. Our proficiency includes:

HW Design & PCB Layout: Cadence®, Mentor®, Altium®, MATLAB® and Simulink® **RF, Signal Integrity & EMC Simulation:** Agilent ADS, ANSYS HFSS™, Cadence®, HSPICE®, MATLAB® and Simulink®, Mentor®

FPGA Development: Xilinx (Vivado®, ISE®), Questa®, ModelSim® SE, NC-Sim, Synplify Pro®, Synopsys Design Compiler®

DSP Development: Mathworks MATLAB/Simulink, TI Code Composer

Mechanical Design: SolidWorks®, SolidWorks® Simulation, CircuitWorks™, Autodesk® Firmware & Software Development: GNU C/C++, Keil μVision, IAR Embedded Workbench, Freescale/Metrowerks Code Warrior, Microsoft Visual Studio, Xilinx® EDK/SDK, etc. Our High-End Laboratory Equipment: Network Analyzers, Vector Signal Generator, Signal Analyzer, RF Signal Generators, Spectrum Analyzers, Electronic Loads, Thermal Chamber, Logic Analyzer, and various multi-channel high-speed Oscilloscopes to 40 GS/s

Locations

Ottawa Design Center and Headquarters

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Kitchener-Waterloo Design

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