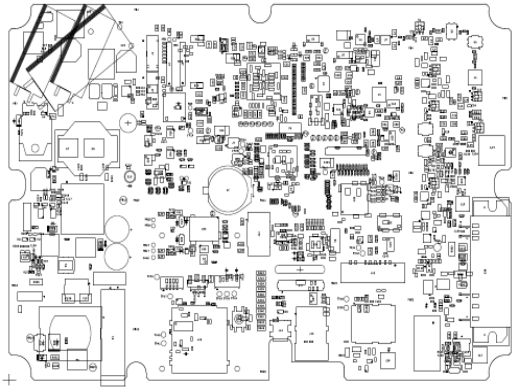
fidus
innovate•design•deliver

high speed, high complexity

PCB LAYOUT



How we help

Do you want to: Increase your **revenue?** Reduce your **costs?** Increase your **speed** and **flexibility?** Focus on your **core competency?** Consider Fidus for electronic product development and consulting services.

Our PCB Layout team *hits the highs* - high-speed, high frequency, high complexity, high density, high layer counts, and high performance dielectrics! From simple standalone boards to very thick, high-speed, mixed technology, back drilled backplanes... Fidus delivers.

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

Design expertise

Designations: Our designers have CID/CID+ accreditation
High Density Interconnect (HDI): Microvia/stacked microvia, blind and buried, via-in-pad, fine-line, buried capacitance
High-speed: 28Gbps+ serdes, DDR3/4/5 memory interfaces
RF/wireless/analog: 24GHz+, including, 2.4GHz and 5GHz, printed antennas, other printed elements, sensitive signal handling
Impedance control: Single ended, differential
PCB types: Rigid, Flex, Rigid-Flex
PCB materials: FR4, Polyimide, high speed/low loss dielectrics, (Megtron 6/7), hybrid constructions (e.g. FR4/Rogers), RoHS
Layer counts: 2 to 40+ layers
Layer stacks: Custom layer stacks for signal integrity
Constraint driven placement and routing: Net topology and scheduling, absolute and relative propagation delay matching, limiting parallelism to avoid crosstalk, package pin delays, phase matching and back drilling, etc.
Signal Integrity: Pre and post-route analysis and simulations to increase timing margins, reduce reflections, and reduce EMI, fiber weave effect mitigation
Power Integrity: Capacitor placement, plane assignment, dielectric thickness, and simultaneous switching noise (SSN) optimizations, current carrying and thermal analysis/strategies
Layout/Mechanical integration: Component interference checking
DFx: Balancing cost, yield, and DFM/DFA/DFT

Tools for high-end development

PCB Layout: Cadence®, Altium®, Mentor® (Expedition and PADS)
PCB Signal Integrity: Agilent ADS, ANSYS HFSS™, Cadence® Allegro PCB SI SPECCTRAQuest), Cadence PSPICE®, Synopsys HSPICE®, Mentor Graphics HyperLynx®

Fidus – an excellent choice

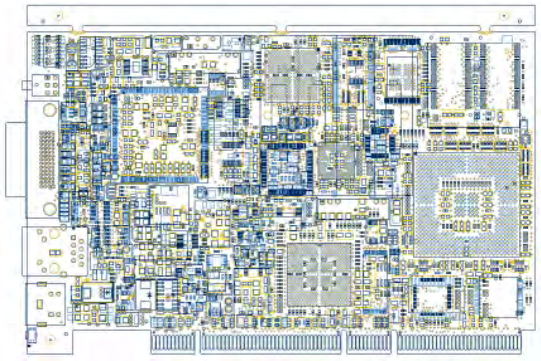
At Fidus Systems, we understand the unique challenges faced by technology companies – too many projects and too few engineering resources. With top engineering talent, multiple design centers and on-site staffing options, Fidus provides highly responsive engineering teams that are an extension of your 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 1500 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.

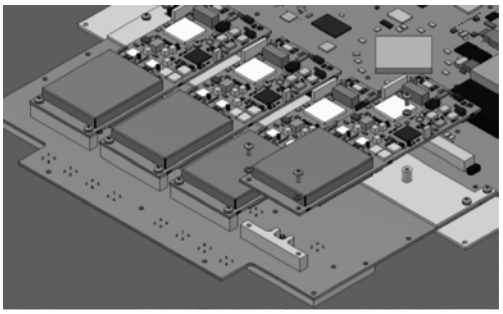
XILINX® | ALLIANCE PROGRAM PREMIER MEMBER



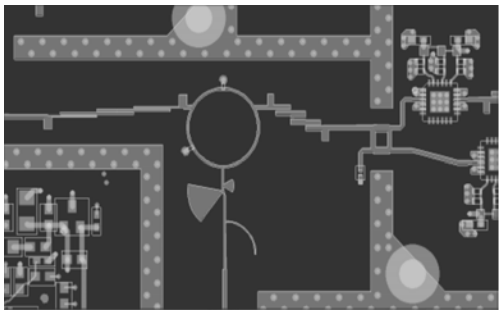
Bringing you Xilinx premier

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.

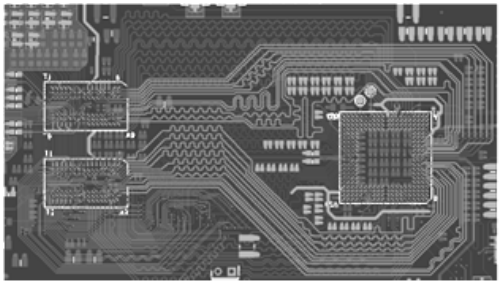
Examples of our work



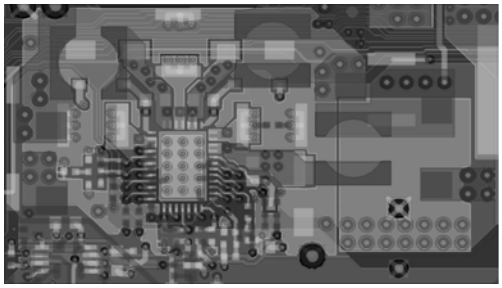
Full CCA and mechanical integration



RF/Wireless design and routing



High-speed memory layout
DDR3/4/5, EMI etc.



Conscientious power placement,
fan-out, and routing

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 and signal integrity teams architect, design and deliver next-generation products for clients in emerging technology markets. We build long-term relationships by consistently exceeding expectations.

Ottawa • Waterloo • San Jose

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