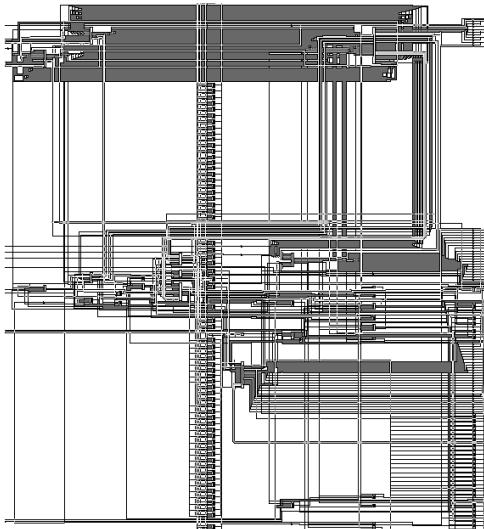


Our capabilities:

FPGA/CPLD Design



Why Choose Fidus?

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 developing long-term relationships with clients built on integrity, quality and open communications. **With a 97% referral rate, we are proud to say our clients like our work.**

Fidus has delivered more than 800 projects for 215 clients, from Tier-1 multinationals to SMEs to start-ups. Fidus is headquartered in Ottawa, Canada with local design centers in Kitchener-Waterloo and Silicon Valley.

How Can We Help You?

Do you want to: Increase your **revenue**? Reduce your **costs**? Increase your **speed** and **flexibility**? Focus on your **core competency**?

We all do. So consider Fidus for FPGA/CPLD Development, Staff Augmentation, and Consulting Services.

Our FPGA design team's skills are readily complemented by Fidus' Hardware, PCB Layout, Signal Integrity/EMC, RF/Wireless, and Software expertise.

Expertise

Fidus' FPGA designers are experts in:

- **Turnkey:** Completing full FPGA designs, documentation, and verification
- **Device selection:** Identifying the most appropriate device for your job
- **Device retarget:** Helping you migrate from one FPGA to another
- **Languages:** Verilog®, VHDL, SystemVerilog
- **ASIC-to-FPGA Conversion:** Replacing low-volume or discontinued ASICs with low cost FPGAs
- **ASIC prototyping in FPGAs:** De-risking your ASIC development by first implementing your design in one or multiple FPGAs
- **Multi-Gigabit Serial Links:** From FPGA coding to signal integrity to board layout
- **Memory Interfaces:** DDR2/3, SRAM, EMI, etc.
- **Communication Protocols:** TCP/IP, Ethernet, SONET/SDH, ATM, Frame, Relay, etc.
- **Digital Signal Processing (DSP):** Software Defined Radio (SDR), filters, echo-cancellation, 802.11 a/b/g Wireless LAN, etc.
- **Video:** Digital Video Interface (DVI), Image enhancement, Scaling, etc.

Devices and Tools

Devices:

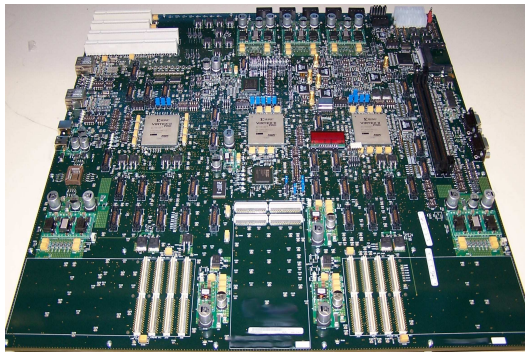
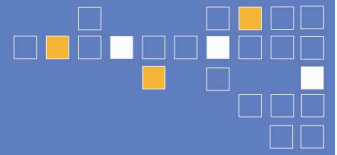
- Manufacturers: Actel®, Altera®, Lattice, Xilinx®, and others
- Families: MAX®, Cyclone®, Arria®, Stratix®, CoolRunner™, Spartan®, Virtex®, IGLOO®, and others

Partnerships:

- Altera Design Services Partner
- Xilinx Alliance Program – Certified Member

Tools:

- Simulation/Code Coverage: ModelSim SE, NC-Sim, Verilog-XL, Synopsys VCS®
- Synthesis: Synplify Pro®, Xilinx XST®, Synopsys Design Compiler®, Mentor Graphics Precision RTL
- Place & Route: ISE®, Quartus® II, Max+Plus® II
- Lab tools: Programming pods, SignalTap™, Reveal, ChipScope™



ASIC Emulation Platform

Contact Us

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■ ■ ■ Examples

Military Airborne DSP Platform FPGA

Highlights

- 2GS/s FIR filter design
- 250MHz, 32-bit DDR ADC Interface
- 250 MHz 64-bit SDRAM Interface

Automated Test Equipment

Highlights

- DDR3 Memory Interface (800Mbps)
- Gigabit Transceiver (3Gbps)
- LVDS Interface (1.25Gbps)

AIS Software Defined Radio FPGAs

Highlights

- ADC and DAC direct conversion interfaces
- TX/RX level control, Decimation, Channelization
- Time Slot Synchronization
- Dual internal Processors
- Multiple Serial Interfaces

Transportation Automation System CPLDs

Highlights

- Design based on 16 CPLDs, the system conforms to stringent European standards for public safety. Each device contains three separate slices, designed differently by separate designers and independently verified, to work in parallel.

ASIC discontinued, Fidus delivers FPGA Solution

Highlights

- Working only from the obsolete ASIC data sheet, the FPGA was developed to carry Ethernet-over-SONET, using LAPS protocol
- Delivered with a custom, fully-automated test environment
- Since this program, Fidus has launched a family of easily configurable, FPGA-based obsolete ASIC replacements. These solutions have been increasingly popular with Military and Defense equipment manufacturers.

ASIC Emulation Platform

Highlights

- Created an FPGA platform to allow our customer to assess the operation of their ASIC code prior to tapeout
- Three leading edge FPGAs, carefully interconnected with high-speed I/O, provided the ASIC simulation sandbox
- Platform included multiple PCI, PMC, and Power Systems