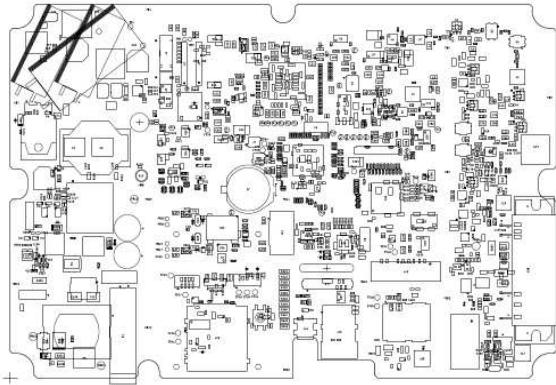


Our capabilities:

PCB Layout



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 Printed Circuit Board (PCB) Layout Development, Staff Augmentation, and Consulting Services.

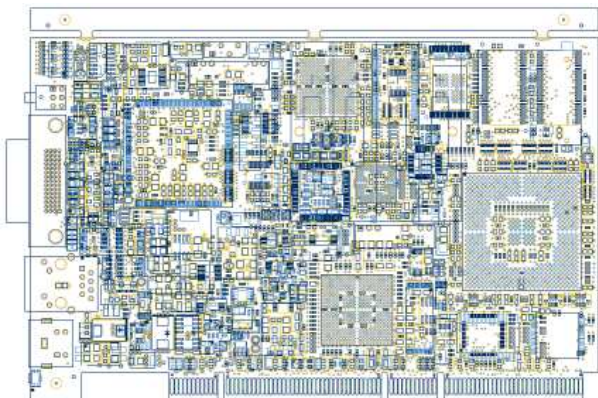
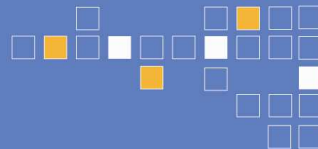
Our Layout design team's skills are readily complemented by Fidus' Hardware, Signal Integrity/EMC, RF/Wireless, FPGA/DSP, and Embedded Software expertise.

Expertise

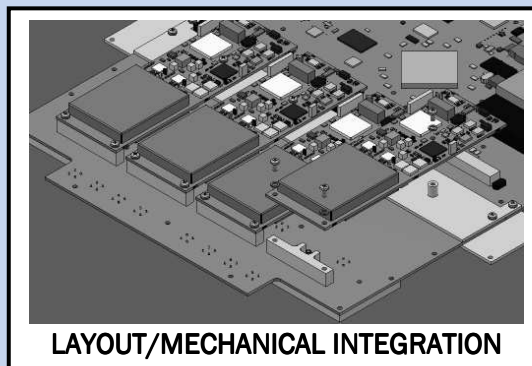
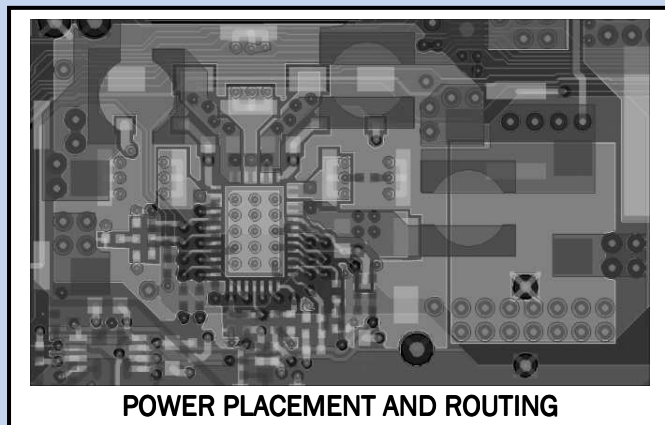
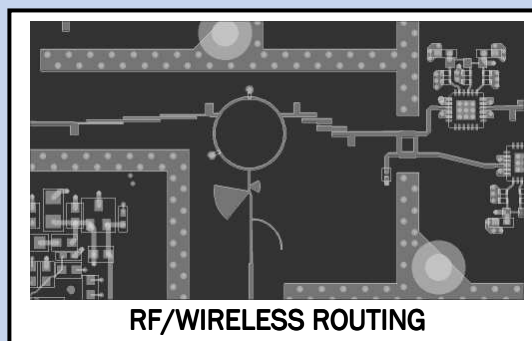
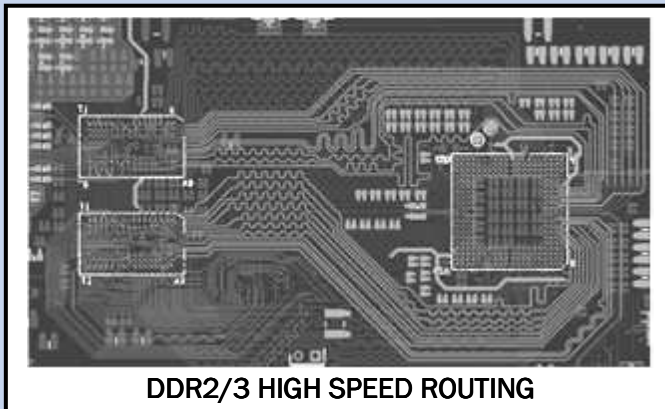
- **Designations:** Our designers have CID/CID+ accreditation
- **High Density Interconnect (HDI):** Microvia, blind and buried vias, via-in-pad, fine-line, buried capacitance and resistance
- **High Speed:** 10Gbps+, DDR2/3 Memory Interfaces, etc.
- **RF/Wireless/Analog:** 24GHz+, including, 2.4GHz, and 5GHz, printed antennas, and other printed elements, low magnitude signal protection
- **Impedance Control:** Single ended, differential pair (edge or broadside coupled)
- **PCB Types:** Rigid, Flex, Rigid-Flex
- **PCB Materials:** FR4, Polyimide, high speed/low loss dielectrics, hybrid constructions (e.g. FR4/Rogers), RoHS, various Cu weights and trace thicknesses
- **Layer Counts:** From 2 to 30+ layers
- **Layer Stack Definition:** We routinely generate our own layer stacks to ensure good signal integrity at a minimum cost
- **Constraint Driven Placement and Routing:** Net topology and scheduling, absolute and relative propagation delay matching, limiting parallelism to avoid crosstalk, etc.
- **Signal Integrity:** Pre- and post-route analysis and simulations to increase timing margins, and reduce reflections and EMI
- **Power Integrity:** Capacitor placement, plane assignment, dielectric thickness, and simultaneous switching noise (SSN) optimizations
- **Power Routing:** Optimal power distribution using correctly sized traces, vias, pads, pours, and planes
- **PCB Land Pattern Library:** Consistent, proven, built in-house
- **Layout/Mechanical Integration:** Avoiding alignment and interference issues by importing the circuit board into the mechanical design package
- **DFx:** Finding the right balance between density, cost, yield, and DFM/DFA/DFT

Our PCB Layout and Signal Integrity Tools

- **PCB Layout:** Altium PCAD®, Altium Protel®, Cadence® Allegro PCB Design XL (Allegro Expert), Cadence OrCAD® Layout, Mentor Graphics PADS®, Mentor Expedition™, Mentor Graphics Blaze Router
- **PCB Signal Integrity:** Agilent ADS, ANSYS HFSS™, Cadence® Allegro PCB SI (SPECCTRAQuest), Cadence PSPICE®, Synopsys HSPICE®, Mentor Graphics HyperLynx®



■ ■ ■ Project Examples



Contact Us

In Canada

■ ■ ■ Fidus Systems Headquarters

900 Morrison Drive
Suite 203
Ottawa, ON K2H 8K7
Canada
Tele: +1.613.828.0063 x200
Fax: +1.613.828.3113
Email: info@fidus.com

For all Defense, Aerospace, Security and Government inquiries, please contact Peter Connolly at +1.613.799.7172 or peter.connolly@fidus.com

■ ■ ■ Fidus Kitchener-Waterloo Design Center

121 Charles Street West
Suite C212
Kitchener, ON N2G 1H6
Canada
Tele: +1.519.576.0060
Fax: +1.519.576.5399
cameron.redmond@fidus.com

In United States

■ ■ ■ Fidus California Design Center

1900 McCarthy Blvd.
Suite 415
Milpitas, CA 95035
Tele: +1.408.217.1928 x151
Fax: +1.408.899.5822
kerry.huxley@fidus.com

Outside of North America

Contact Michael Wakim at
michael.wakim@fidus.com