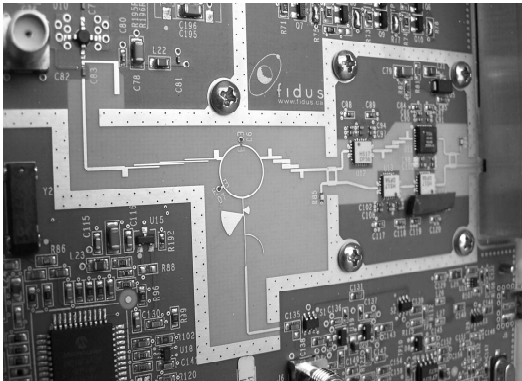


## Our capabilities:

# RF/Wireless



## 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 RF/Wireless Electronic Product Development, Staff Augmentation, and Consulting Services.

Fidus' RF designers draw on their diverse backgrounds, and rely on the best high frequency design tools available, to help you achieve your goals. Fidus not only provides the expertise but we also let you leverage our capital investment in expensive RF tools and equipment.

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

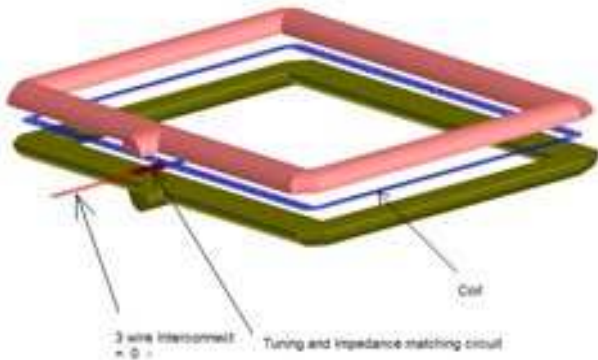
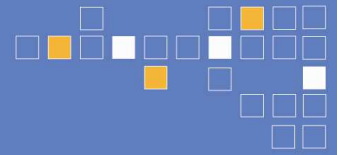
## Design Experience

Fidus' specialists have experience designing or designing with:

- **Antennas (Printed/Ceramic/Discrete):** Wi-Fi/WLAN (802.11), Bluetooth®, GPS, HDTV (UHF/VHF), mmWave, RFID, ZigBee®, Power Meters, and lots of others...
- **Analog/Discrete Design:** Filters, Couplers, Detectors, Passive Equalizers, Switches, etc...
- **Direct Conversion:** Utilizing high speed ADCs and DACs
- **Modulators/Demodulators:** FSK, GMSK, QAM/QPSK, OFDM, CMDA, etc...
- **Power Amplifiers:** High linearity, high efficiency, clean spectral masks
- **Receivers:** High sensitivity, large dynamic range AGC loops and variable attenuators
- **References:** Low phase noise PLLs/Synthesizers, DDS sources, OCXO/TCXO/VCXO
- **Specific Absorption Rate (SAR) Computation:** RFID, cell phones

## Our RF/Wireless Design Tools and Equipment

- **RF/Wireless Design Tools:** Agilent ADS, ANSYS HFSS, Cadence Allegro PCB SI, Synopsys HSPICE, MATLAB/Simulink, Mentor Graphics HyperLynx
- **RF Laboratory Equipment:** Agilent Network Analyzer, Agilent Vector RF/Signal Generator, Agilent PXA Signal Analyzer, Agilent Digital Signal Analyzer, HP Signal Generators, NHR Power Supply Analyzer, Advantest Spectrum Analyzer, Multi-channel high-speed oscilloscopes to 40 GS/s
- **Miscellaneous:** AIS Test Generators and COTS Transponders and Receivers



## Contact Us

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### In United States

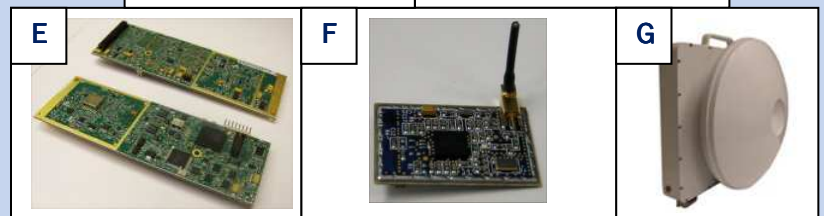
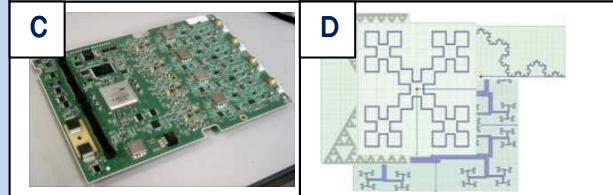
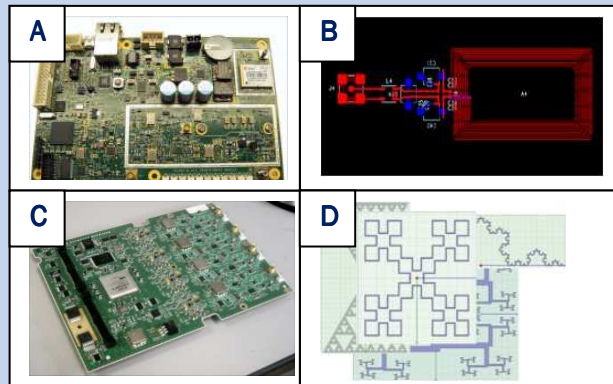
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## ■ ■ ■ Examples



**A. AIS Class B Transponder:** Software defined radio compliant to all AIS related IEC specifications. Features FPGA-based DSP, a multi-channel high-sensitivity receiver, GPS, and a 12.5W VHF power amplifier.

**B. RFID Antenna:** Designed, simulated, and tuned to assist a semiconductor manufacturer in proving out their IC design.

**C. WiMAX Modem Interface:** Connects pole mount radio head to WiMAX base station. Multi-Stage diplexers, DC to 500MHz operation, Virtex-4 FPGA for channel signal processing and control.

**D. HDTV Antennas:** Various printed antenna patterns were assessed, prior to final selection, design, simulation, tuning, and field trials.

**E. 2.5/3.5GHz Radio Modules:** WiMAX beamforming system containing several Radio Modules each containing high-speed ADCs and DAC, and FPGA for processing.

**F. ZigBee Module:** Tiny ZigBee module with custom antenna design. Used for wireless HVAC and lighting control.

**G. 24GHz Point-to-Point IP Radio:** Complete mmWave system design including RF, horn antenna, waveguide, and pole mount chassis design. (Internal PCB shown on front page).