

solutions to simplify.

FPGA Design & Prototyping Digital Design

Graz, November 2023

A hand is shown interacting with a glowing digital network overlaying a laptop screen. The network consists of blue dots connected by lines, creating a complex web-like structure. The hand is positioned as if it is touching or manipulating the network. The background is dark, and the overall scene has a futuristic, technological feel.

FPGA Design & Prototyping



FPGA Design and Development



Design Excellence

Expertise in FPGA design including RTL design, synthesis, place-and-route and seamlessly generation of the FPGA configuration bitstream.



Holistic System Integration

Design and integrate heterogeneous FPGA systems with and without microcontrollers flawlessly, pushing the boundaries of innovation.



Effortless Prototyping

Transition ASIC concepts into FPGA prototypes, selecting the most suitable FPGA prototyping boards.



FPGA Design and Development



Prototyping Expertise

Navigate FPGA prototyping with confidence. Picking the optimal FPGA prototyping boards and seamlessly transitioning your ASIC designs into robust FPGA implementations.



System Integration and Testing Mastery

Our team is dedicated to aiding you in the integration of diverse hardware and software components, diagnosing system-level challenges, and executing comprehensive testing for impeccable results.

FPGA Design and Development

FPGA Tool chains

AMD (Xilinx) Vivado

Intel Quartus



Digital Design and Verification

RTL in Verilog or SystemVerilog and also High-Level Synthesis (HLS)

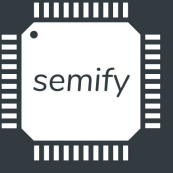
Functional verification with xsim, Xcelium, Modelsim or Verilog Icarus

Directed tests in Verilog and SystemVerilog or C/C++

Python based verification

Debugging using Vivado Logic Analyzer

Diverse FPGA Collaborations



FPGA Prototyping

Our track record includes collaborations with a range of FPGAs, spanning

AMD (Xilinx): Artix, Kintex

Intel (Altera): Cyclone

Lattice: ECP3

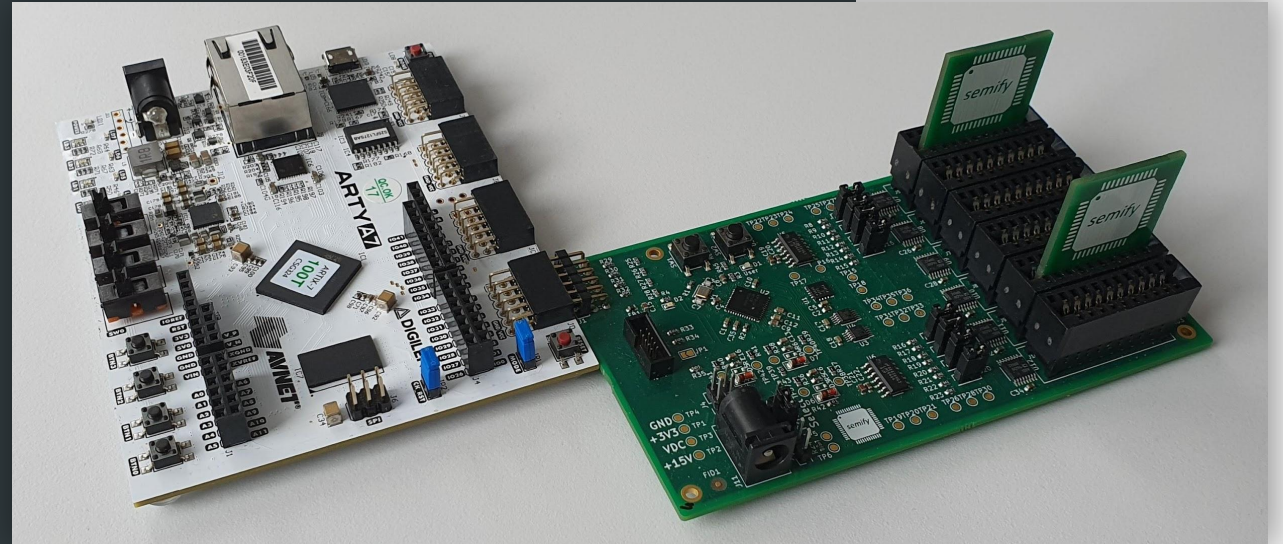
Our experience extends to various FPGA boards, including

Digilent: BASYS3, Arty A7, Arty Z7...

Opal Kelly: XEM7310, XEM7310MT

Xilinx: KCU116

Numerous application-specific boards



Your Gains with semify's Digital Design Expertise



FPGA Design & Prototyping



Custom Specific Time-to-Market Solutions

We tailor FPGA-based prototypes to match your project's unique requirements, propelling your journey to market success.



FPGA Excellence in Action

Our skilled team of FPGA engineers, with extensive industry experience, crafts solutions that match your precise needs.



Efficiency and Quality Aligned

Leverage FPGA-based prototypes for efficient development without compromising quality, preserving your time and resources



Digital Design



ASIC Design and Development



Digital Design

Digital design and verification for full ASICs or subsystems
Integrating DfT measurements
Implementation of microcontroller based and FSM based designs



Used Tooling

Cadence Simulation (Xcelium),
Synthesis (Genus), STA (Tempus)
and ATPG (Modus) tooling
Linting (Cadence, Spyglass)
CDC and RDC (Questa CDC)
PnR Supervision (Inovous)

The Cadence logo, featuring the word "cadence" in a lowercase, sans-serif font. The letter "a" has a red horizontal bar above it.The Synopsys logo, featuring the word "SYNOPSYS" in a bold, purple, sans-serif font. A registered trademark symbol (®) is located at the top right of the word.The Siemens logo, featuring the word "SIEMENS" in a bold, teal, sans-serif font.



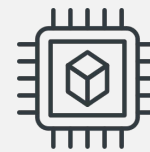
From System to Block-Level

Craft complete systems, digital subsystems, and blocks with precision and purpose based on our strong expertise in Mixed Signal ASICs development.



Technical Proficiency

Covering all digital design and verification aspects - RTL to GDS, digital and mixed mode verification.



Powerful Industry Network

Leverage our well-established connections for full ASIC development support.

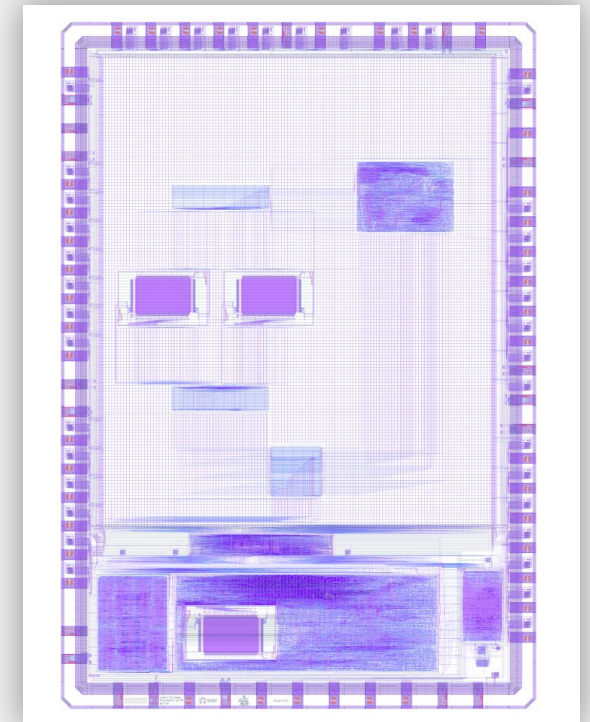
Digital Design for ASICs

Microcontroller based designs

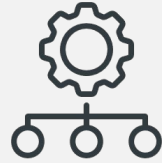
- Cortex M33 based dual core system
- Cortex M0 based system
- RISC-V based system

Mixed signal designs

- Audio amplifier with signal processing
- Power management
- Graphic IPs
- Motor control applications
- And more...



Your Gains with semify's Digital Design Expertise



Custom Solutions for Faster Time-to-Market

Align your projects with bespoke digital design solutions for swift market entry.



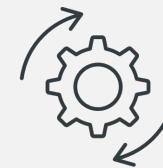
Collaboration and Transparency

Our approach is built on trust and open communication.



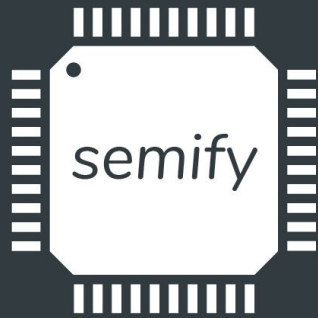
Expert Engineers at Your Side

Our seasoned Digital Design Engineers bring years of cross-industry experience, shaping tailored solutions.



Efficiency Meets Excellence

Our tailored approach optimizes resource use while delivering top-notch results.



solutions to simplify.

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