

solutions to simplify.

# FPGA Design & Prototyping Digital Design

Graz, August 2023



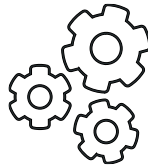
# FPGA Design & Prototyping

## 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

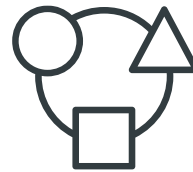
Transition ASIC concepts into FPGA prototypes, selecting the most suitable FPGA prototyping boards.

## 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



## FPGA Prototyping

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

AMD (Xilinx): Artix, Kintex

Intel (Altera): Cyclone

Lattice: ECP3

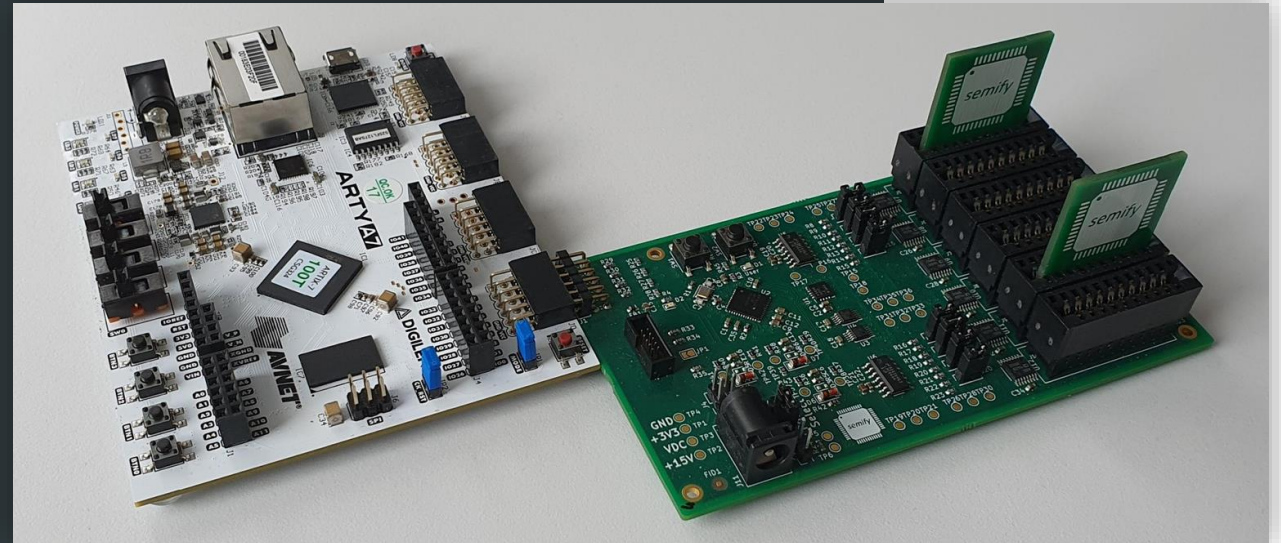
**Our experience extends to various FPGA boards, including**

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

Opal Kelly: XEM7310, XEM7310MT

Xilinx: KCU116

Numerous application-specific boards



## 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.



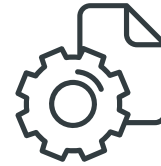
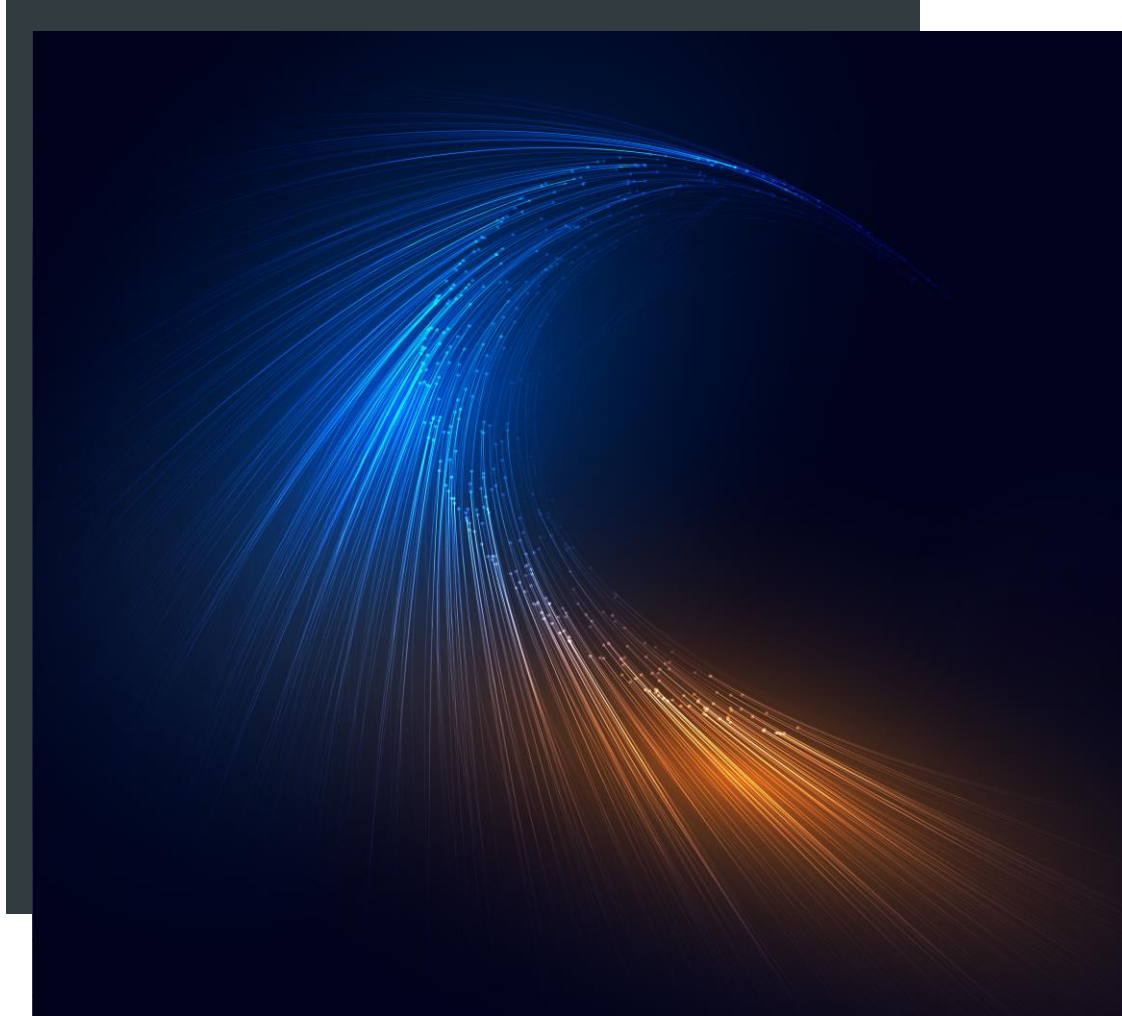
### Efficiency and Quality Aligned

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



# Digital Design





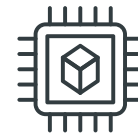
## From System to Block-Level

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.

## 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)



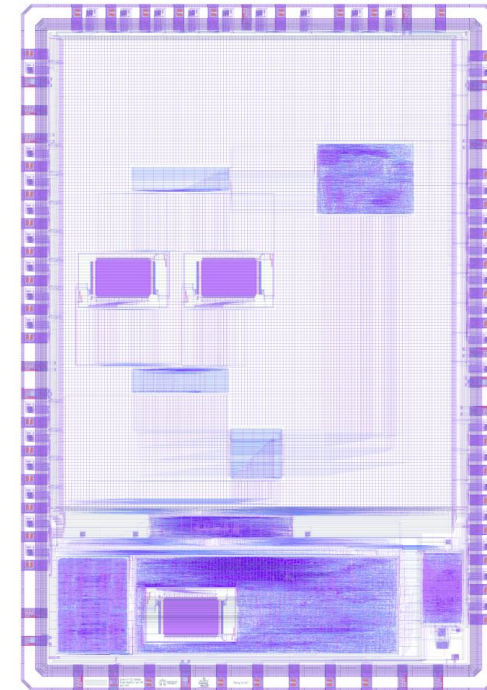
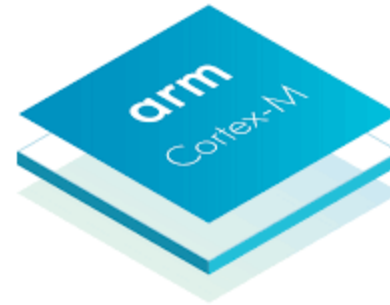
## Digital Design for ASICs

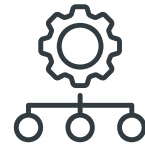
### Microcontroller based designs

- 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...





## Custom Solutions for Faster Time-to-Market

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



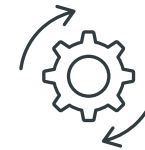
## Collaboration and Transparency

Our approach is built on trust and open communication.



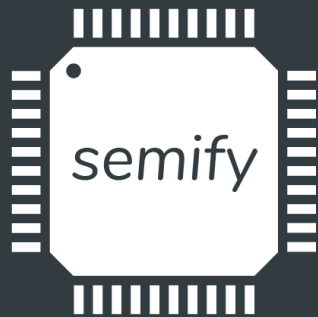
## Expert Engineers at Your Side

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.

# Contact Information

Email: [office@semify-eda.com](mailto:office@semify-eda.com)

Website: [www.semify-eda.com](http://www.semify-eda.com)

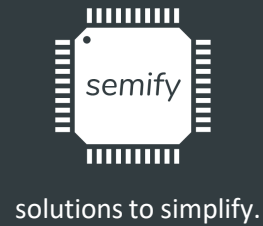
LinkedIn: <https://www.linkedin.com/company/semify-eda>

Phone: +43 699 1555 7769

**Address:**

semify GmbH

Neubaugasse 24, 8020 Graz - Austria



We eagerly anticipate  
the opportunity to  
connect and receive  
your response!

Graz, August 2023