

SED2

Senior Embedded Developer



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sed2 is an experienced Embedded Developer with over 10 years of professional experience. **sed2** has expert skills in the areas of Hardware, Microprocessors and Linux. Also experienced in low-level Programming with C/C++. Moreover, competences cover System Architecture Design and Real-time processing. **sed2** has excellent practical knowledge of SOC/FPGA Development.



2015 - 2020

Aviation Industry Company
(Large Enterprise)

Senior Embedded Software Engineer

Design and implementation of data acquisition system based on MPSoC device. Vivado designs using ready IP Cores plus VHDL interfaces implementation (Critical path activities); C++ Design and implementation of software units running under Linux, ARM core;

Hardware lab setup and low level oscilloscope checks; Model Based Development Scade/Simulink; Requirement Traceability Assurance; Data Loader Application; Specific requirements preparation; C Implementation of application: all communication layers above card drivers & protocol files exchange; AFDX Card debugging; System High Level Functions validation; Test Scenarios preparation and validation; VBA/Python supporting tools; Unit tests implementation;

2010 - 2014

Technological Research Company
(Small Business)

Senior Developer

Multichannel Ultrasound Platform with real-time processing (192ch., @65MSPS, 12bit); VHDL implementation of scheduler, SPI communication, multichannel TX/RX blocks, Quartus II; VHDL test benches – modules wrappers for test/simulation in ModelSim; IP modules integration in Altera Stratix IV: PCI-Express gen.2 (hard-IP), DDR2 controller, DMA; Hardware debugging using protocol analyzers, oscilloscope;

C implementation co-microcontroller functionality (Atmel Studio); FPGA configuration, power supply monitoring, I2C onboard memory configuration; Python scripts – supporting tools; Hardware Design Verification – Mentor Graphics; Matlab signal processing analysis; VHDL implementation of IIR multichannel filtration in Altera Cyclone FPGA; C# .net WPF GUI for touch screen; Microcontroller drivers for OLED small display (TI Code Composer Studio); uC drivers for peripheral devices like: thermocouples, accelerometers; Xilinx Vivado on Linux platform used for Spartan SoC generation; Scripting in BASH;

Warsaw University of Technology
faculty of Mechatronics:
Automatics and Robotics

● Master's degree

Thesis: VHDL project and implementation of a multichannel ultrasonic elastography algorithm in the Altera FPGA logic

Warsaw School of Economics

● Project Management

Postgraduate studies according to PMI

○ .NET Advanced Training

○ ARM Cortex / FRAM Workshops

○ LDRA Training

○ Communication US/UK Trainings

English

Full professional proficiency

German

Limited working proficiency

Polish

Native or bilingual proficiency

– DOMAIN

- Python
- Linux
- SOC/FPGA Development
- ARM Core Microprocessor knowledge
- ARINC multiple HW interfaces
- C/C++/C#
- VHDL
- System Architecture Design Hardware/Software

- Real-time processing
- Hardware level debugging

– SUPPORTING

- Simulink
- Matlab
- WireShark
- PCI-e
- ModelSIM
- AFDX
- Atmel Studio
- Hardware Design Verification
- Vivado/Quartus

- BASH Scripting
- Microcontroller drivers
- DOORS
- Dimensions
- Git
- SVN

– SOFT

- Communication
- Creativity
- Innovation
- Mentoring
- Experience in Scrum

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I'm keen on Cycling trips over Europe and Asia & backpackers' trips. Mountain trekking, skiing. I'm also intersted in Logistics, Time Management, Geography as well as Graphic Design