

**SUMMARY STATEMENT**

Highly competent result oriented Embedded Design Engineer experienced in successful full life cycle product development in the toughest time constraints. Capable to materialize ideas into real life, independently find solutions to most challenging problems and deliver results in the fastest manner. Extensive hardware and software development experience accompanied by leadership, communication and interpersonal skills. Eager to apply my skills and knowledge to benefit your company.

**CORE COMPETENCIES**

Product Development/Testing  
Hardware/Software/Layout  
Digital and Analog Design  
Programmable Logic  
Microprocessors and DSPs

GUI Development  
Web Development  
Coding Ninja  
Productivity and Efficiency  
Component Research/Integration  
Mass Production

Creative Problem Solving  
Goal and Detail Orientation  
Self-sufficiency and Leadership  
Excellent Interpersonal Skills  
Diverse Life Experiences  
Unique Personality

**PROFESSIONAL EXPERIENCE****Contract Engineer,****Simply Works Electronics**, Boulder, CO*2010 – Present*

- Exercising independency and self-sufficiency, solving wide range of problems in quickly changing environment and challenging atmosphere
- Working with Penn State University, Earth Science Systems, CEPD, JOWA USA, Cartasite, CIMA Systems, Trimble, Ubiquiti Networks and other companies
- Notable Projects: Wireless Mesh Network System for remote monitoring application, FPGA based hydrophone system
- Design Highlights: custom FPGA cores and FPGA-based processor, Bluetooth, proprietary mesh network systems, Apple and Android hardware/app designs, Embedded Linux development
- Tools: Eagle, Altium, PADs, Xilinx, SolidWorks, MATLAB, VisualCAM, AVR Studios and others
- Hands on mechanical prototyping experience including CNC machining, 3D Printing, Metal Welding

**Embedded Design Engineer,****AeroStream Communications**, Golden, CO*2008 – 2010*

- Successfully completed 4 projects in a fast pace, multitask, small company environment
- Achieved product idea to working prototype in 9 months
- Created architecture for 4-channel SDR(Software Defined Radio system) spread out on up to 8 boards (for noise reduction) achieving most ergonomic design in tightest mechanical constraints
- Designed multichannel RF board. Identifying gain and loss requirements, implementing very efficient design geared towards minimizing noise influence on the analog components
- Completed very dense DSP board design (2x4 inch 10-layer DSP card with 256-pin 400K Gate 1mm-pitch FPGA, 289-pin 0.5mm-pitch DSP, SDRAM, FLASH, NAND and USB)
- Investigated numerous RF and DSP components in order to balance performance and price
- Dramatically reduce cost and simplify design while maintaining best performance
- Oversaw board fabrication and assembly processes insuring highest quality standards

**Electrical Engineer,****Colorado Electronic Product Design**, Boulder, CO*2006 – 2008*

- Successfully conducted advanced research and design in a wide variety of different fields and applications
- Solely designed and debugged code for the Digital Reading Service Receiver project. Code proved to be extremely reliable in the field. Successfully implemented on thousands of units
- Significant VHDL code contribution to the Digital Radio Kit Project including writing, debugging and testing. Final code was implemented on both Xilinx and Altera FPGAs
- Conducted testing of the Land Seismic Acquisition System. Discovered numerous ways to improve system efficiency that were successfully implemented
- Conquered detailed electronic assembly using soldering irons, hot air and IR machines. Perfected my assembly skills while creating prototypes, testing and modifying existing circuits

**Engineering Intern,**  
**The Children's Hospital**, Aurora, CO*Summer, 2006*

- Participated in constructing 1.45 million square foot nine floor hospital designed to accommodate 270 beds, 14 operating rooms, 2 cardiology surgical operating rooms and 9 minor surgical procedure suites
- Actively assisted and enthusiastically proposed numerous ideas in applying new technology during inspections and meetings
- Closely worked with Senior Engineers, organized and modified construction plans using AutoCAD as well as developed databases for the future service and maintenance using ArchiBus software
- Independently worked on power consumption estimation for the whole hospital

**EDUCATION**

Erasmus Mundus Master Program in Embedded Computing Systems (Dropped out)  
University of Kaiserslautern (TUK), Kaiserslautern, Germany  
Norwegian University of Science and Technology, Trondheim, Norway  
August 2011 – December 2011

Embedded Systems Certificate,  
University of Colorado at Boulder, CO, May 2009

Bachelor of Science in Electrical Engineering,  
University of Colorado at Boulder, CO, May 2008

**TECHNICAL SKILLS**

- **Trilingual:** Perfect written/oral English and Russian, Intermediate German
- **Other Languages:** C, C++, Python, Java, Assembly, VHDL, Verilog, Basic, Linux Driver/Kernel development, UML
- **Python Modules:** PyQt, pcap, impacket, pyserial, bbfreeze, pyftplib, bottle, pymodbus, tornado, pyasn1, pysnmp, pycrypto, crontab, mysql, matplotlib, sphinx, pylint, pyreverse, twisted, uncompyle, zope
- **Smart Phone development:** App and hardware development for Android and Apple systems
- **Script/GUI development** under Windows, Linux, Embedded Linux operating systems
- **Web-development:** HTML, CSS, Javascript, PHP, Python, AJAX, SQL, Web Sockets, JQuery, Flot
- **Version Control:** Git, GitHub, BitBucket, Subversion
- **Tools:** Eagle, Altium, PADS Layout and Schematic, Xilinx, Questasim, PSPICE, Multisim, Microwave Office, Electronic Workbench, SolidWorks, AutoCAD, MathLab, Microsoft Office Suite
- Experience in Schematic Capture, PCB Layout, Part Selection and BOM creation
- **Hardware:** TI MSP430, Freescale HCS08, Siemens C501, Atmel C51, Atmega328P, Atmega128RFA1, Atmel SAM D20, Motorola MC68000 and 56300 (DSP), BlackFin 527C (DSP) Processors
- **FPGAs:** Xilinx Spartan 3, Spartan 5, Spartan 6, Virtex 5 and Altera Cyclone 3 FPGAs
- **Protocols:** SPI, I2C, RS232, PWM, Zigbee, Bluetooth, USB, Ethernet, and others
- **Network Protocols:** TCP, UDP, FTP, Modbus, SNMP as well as proprietary protocols
- **Interfaces:** SRAM, EEPROMs, RTCs, Digital and Analog Sensors (Temperature, Pressure, Humidity), Character and Graphical LCDs, PCI interface, PLL, RF mixers, Zigbee modem, AM/PM Transmitters/Receivers, TCP/IP PHY, ADC, DAC, LVDS, JTAG, Audio/Modem Codecs, Keypads, Switches, LEDs, DC Brush/Brushless/Stepper Motors, Hall Effect and Photo-interrupter switches
- Theoretical/Practical knowledge of DSP concepts, FIR and IIR filters, Signal Generation, Image Processing
- Design of Analog circuitry including Power, Amplifiers, Filters and RF
- **Other Skills:** Iron, Hot Air, Infrared Soldering and other assembly skills
- Extended Mechanical Design knowledge(Enclosure, Mold and Fixture designs in SolidWorks)
- Mechanical Prototyping skills including CNC Machining, 3D Printing and Metal Welding
- IT, server and virtual machine experience

**PERSONAL**

**Citizenships:** United States of America, Russia, [StackOverflow](http://StackOverflow), [GitHub](http://GitHub)

**Interests:** Rock/Ice Climbing, Mountaineering, Mountain Biking, Ice Hockey, Telemark Skiing, Scuba Diving, Paragliding, Traveling, Personal Development, Entrepreneurship