



EXPERIENCE

Spacecraft Electrical Engineer

[Redacted], Systems Engineering Department

04/2020 - Present

- Lead redesign of COTS-based flight computer using MIL-Spec and radiation-hardened electronics, facilitating 100% improvement in reliability and on-orbit longevity.
- Standardized cost-effective approach to developing radiation hardened spacecraft avionics, enabling the design of Prototype and Engineering Development Units with lower initial capital investment.
- Optimized hardware designs of SWaP-constrained processing and networking systems based on cutting-edge SoCs and FPGAs, including NVIDIA Tegra K1, Xilinx UltraScale+ MPSoC, and Microsemi PolarFire.
- Drove implementation of [Redacted]'s first metal core PCB designs to address the thermal constraints of high-performance computing (HPC) in space.
- Architected scalable data processing and storage solutions, including a VPX (ANSI/VITA 78) form factor multi-processor array and a Linux-mountable Solid State Data Recorder.
- Authored proposals to attract new business and advance [Redacted]'s technical & product roadmaps. This includes contributions to technical offering for [Redacted], part of contract award valued at \$[Redacted]M.

Field Engineer for Naval Power, Propulsion, and Automation Systems

[Redacted], Government Marine Group

San Diego, CA • Philadelphia, PA • Norfolk, VA • Cádiz, Spain • Dubai, UAE

07/2018 – 04/2020

- Supported US Navy testing of next-gen electric propulsion systems through the development and continual refinement of the Power Recirculation Drive System (PRDS) and associated Hardware in the Loop (HIL) simulator.
- Provided on-site support for power generation, electric propulsion, and vessel automation products from commissioning through end of life.

SKILLS

Hardware Design Tools	Cadence OrCAD Capture CIS; Cadence PCB Designer; Gauss Stack
Engineering Analysis Tools	SPICE; Cadence Sigrity; SPENVIS; CRÈME; RelCalc
HDL (FPGA) Dev Tools	Xilinx Vivado; Microsemi Libero; Intel (Altera) Quartus Prime, ModelSIM
Communication Interfaces	DDR4; I2C; SPI; UART; RS-232/422/485; LVDS; SpaceWire; SATA; SERDES; USB; PCIe; Ethernet; EtherCAT; Modbus; Profinet
Programming Languages	C; C++; Java; Python; MATLAB; ARM Assembly; Shell Scripting
Web & App Development	HTML; CSS; JavaScript; AJAX; Bootstrap; FLASK; Django; SQL; JSON; REST; UI/UX

EDUCATION

Bachelor of Science, Electrical Engineering

University of [Redacted]

2018