ASIF AL NOOR

RF Systems Design, System Design (Hardware), PCB Design

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Toronto, Canada (Canadian Citizen)

Summary

I have 8 years of RF system design experience for IoT, satellites, and rockets. More recently, I had the chance to pick up System Engineering experience when I led the design and development of a full-stack (design to assembly) avionics system for an orbital-scale rocket.

Skills

System design: End-to-end RF subsystem, Full-stack Standards: IPC-610 (PCB), IPC-620 (Workmanship), hardware subsystem, PCB design, JIRA.

budgets, Ground station, Antenna design, Filter design. RF hardware: RFD900x, Iridium, Globalstar, Quasonix, Safran, CCSDS Receivers, Ublox GPS, JAVAD GPS, LimeSDR, uAvionics Transponder.

RF software: CST, HFSS, ADS, COMSOL, MATLAB tools.

AS50881G (Wiring), MIL-810 (Environmental test).

Programming: Python, C, MATLAB, Cube IDE, Linux. PCB design: LT Spice, Altium, Circuit Studio, KiCAD. CAD prototyping: Solidworks, Solidworks electrical. Lab: Oscilloscope, Signal generator, Electrical load, Network Analyzer, Logic analyzer, SMD soldering.

Professional History

Senior RF Specialist - SpaceRyde, Toronto ON

Sept 2021 - Present

- · Designed, implemented and manufactured the avionics system of a rocket including flight computers, GNC, power management, data networking, RF communications on subsystem and component levels.
- · Architected and commissioned the end-to-end RF system to receive rocket telemetry using legacy COTS design. Scope of responsibilities also included the ground station implementation and operation.
- · Interfaced with regulatory authority (ISED) regarding radio licensing for rocket telemetry spectrum licensing.
- · Designed, assembled and tested PCBs incorporating MCU, serial devices, and other critical components.
- · Spearheaded the development of **test procedures and campaigns** to validate the avionics components.
- · Produced systems requirements and derived requirements for developing avionics components.

Intermediate RF Engineer - SMT Research, Vancouver BC

April 2020 - Aug 2021

- · Designed and implemented a battery-less **RF power harvesting** wireless system for structural monitoring.
- · Pioneered custom **RFID passive sensor** tags for remote data logging and pinpointing hidden sensor locations.
- · Installed sensors and DAQs in active construction sites and provided technical support to installation technicians.

RF Engineering Consultant - Direct Kinetic Solutions, Texas (Remote)

July 2017 - May 2019

· Produced custom Cubesat EPS and RF system concepts for clients and DOD grant applications.

Lead RF Engineer - Helios Wire, Vancouver BC

July 2017 - May 2019

- · Designed, simulated and successfully deployed C, X and S-Band antennas for CubeSat TT&C communication.
- · Conceptualized and modeled an iot gateway to interface between Cubesat in space and IoT tags in the ground.

Educational History

MASc in EE - University of British Columbia, Kelowna BC

Sept 2014 - Oct 2016

· Master Thesis: "A broadband fixed-beam leaky-wave antenna based on transformation electromagnetics."

BSc in EEE - Islamic University of Technology, Bangladesh

Jan 2010 - Oct 2013

· Activities: Led the university robotics team during the NASA Lunabotics Annual Competition 2013.

Ongoing Personal Projects

velopment kit using STM32F407 with modular shields. based game on Tx2i Jetson Nano for my toddler.

Embedded Hardware and Firmware: Developing a de- Computer vision: Implementing a gesture detection-