

# SEAN MONAHAN

ELECTRONICS ENGINEER

## PROFESSIONAL SUMMARY

Senior Electronics Engineer with over 10 years' experience in circuit design, electronics integration, software development and project management. Currently a civilian employee at the Chemical Biological Center of the United States Army Combat Capabilities Development Command (CCDC) focusing on electronics development and integration relating to Chemical, Biological, Radiological and Nuclear (CBRN) defense. Primary skills are in quick turnaround PCB design and software development in Python for Joint Urgent Operational Need (JUON) capabilities.

## WORK EXPERIENCE

### SENIOR ELECTRONICS ENGINEER

DEC 2017 - PRESENT

US ARMY - CCDC - CBC - ADM

- Serves as lead electronics engineer for the Unmanned Systems Team within Advanced Design and Manufacturing (ADM).
- Designs, builds and tests Chemical and Biological defense systems and components for military systems.
- Designs custom rigid and flex PCBs in Altium Designer, generates complete PCB design data packages, and works with board houses to ensure proper fabrication and assembly.
- Lead electronics engineer for the design and production of the DEEP Purple multi-rotor unmanned aircraft. Designed the aircraft power management systems, flight controller, processor, and sensor support electronics.
- Lead electronics engineer for the design and production of the Array Configured of Remote Networked Sensors (ACoRNS) universal sensor payload interface.
- Understanding of Linux based embedded systems and networking concepts for use with sensor systems over a radio network.
- Developed and supports a python application to display sensor data from CBRN and ISR sensors attached to various autonomous aircraft and ground vehicles.
- Provides SME support at test events, demonstrations, field installations, and performs on-site/remote electronics troubleshooting for military systems.

### ELECTRICAL ENGINEER

JUL 2010 - DEC 2017

US ARMY - RDECOM - ECBC - ADM

- Developed a custom insole flex-board circuit to read from specialized load sensing foam for monitoring dynamic and static stresses of a fully burdened soldier.
- Served as lead engineer for the organization on a large inter-agency development team that developed a route clearance training asset using low-cost radio-frequency technology.
- Software engineer and project lead on a team that developed a GUI that mimicked the operation of a mine and IED detection system's display unit for route clearance training in a virtual simulator.
- Served as project lead on a team that investigated, designed, built, and evaluated a military hardened solar powered solution prototype for around the clock remote chemical detection.

## CONTACT

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## SECURITY CLEARANCE

Secret

## SKILLS

Altium Designer

*Custom rigid/flex PCB design*

Electronics Troubleshooting

*PCB/Electronics issues*

Embedded Systems Integration

*Linux based SOM integration*

Software Development

*Python for cross-platform applications*

Networking

*TCP/IP configuration and management*

Unmanned Systems

*UAS/UGV autonomous platform integration*

## EDUCATION

B.S. Electrical Engineering

*Pennsylvania State University, 2009*

## CERTIFICATIONS

Systems Engineering - Level III

*Defense Acquisition University*

## AWARDS

1<sup>st</sup> Place - Design Category

*2018 Coffee with Colleagues*

*Solar Powered JCAD*