Team 3: IoT Nerf Turret

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DORNERWORKS

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Notable Challenges

- System-level integration
- FPGA & Petalinux development
- Hardware implementation

Project Requirements

- Custom hardware board
- Remote control through mobile app
- WiFi video feed from turret
- Embedded Linux OS with custom FPGA implementation

Project Overview

The goals of this project were to develop a remote controlled nerf turret using a Xilinx FPGA kit. To accomplish this, a custom hardware expansion card was developed to interface the FPGA to its peripherals. A mobile app was also developed to control the turret remotely through Wifi.

Special thanks to

Dr. Nicholas Baine
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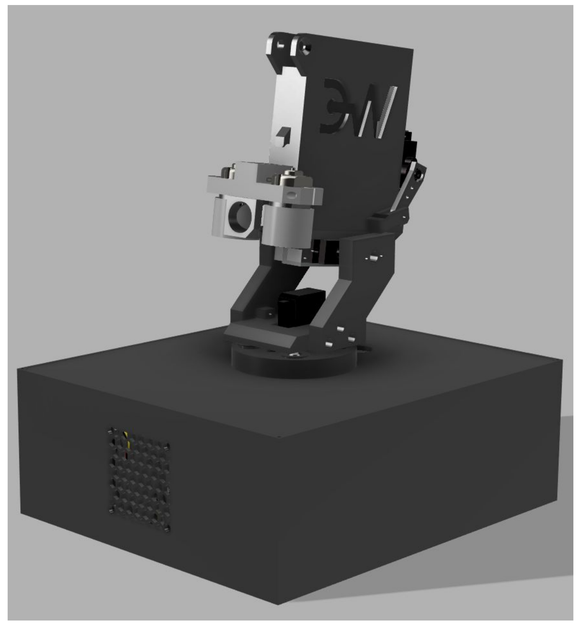
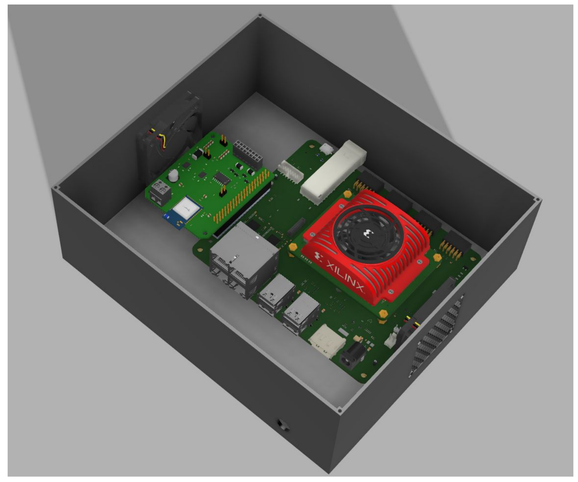
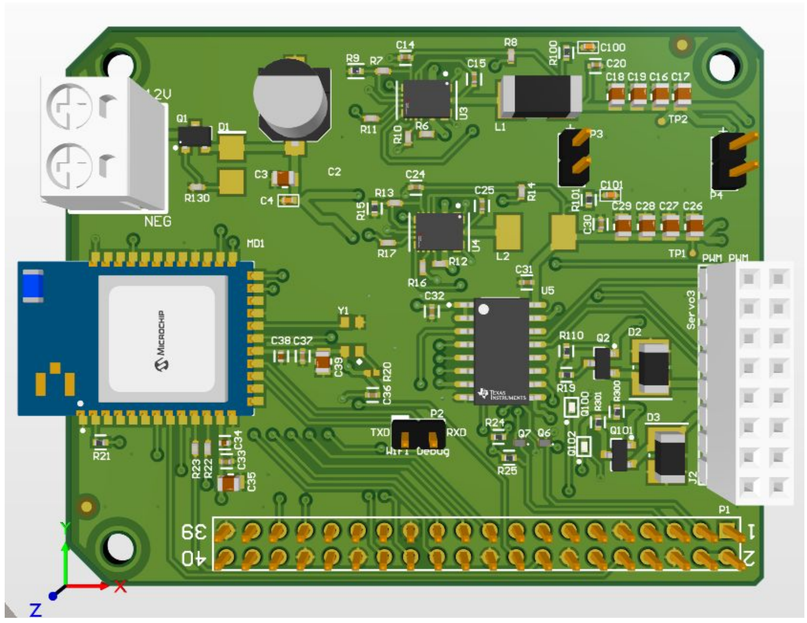
Mike Rainwater



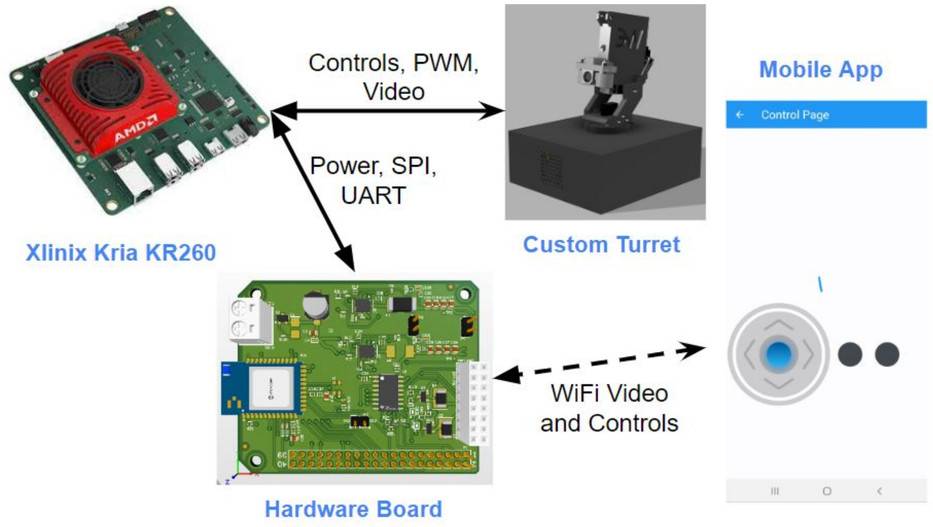
Turret and Enclosure



Custom Hardware Expansion Card



System Overview



ALTIUM DESIGNER