

# WildSight TinyScrubCam



## Meet the Team



**Ryan Hovan**  
ECE Design Engineer  
Lead



**Aliza Siddiqui**  
Team Leader Project  
Manager



**Amelie Salas**  
ME Design Engineer  
Lead



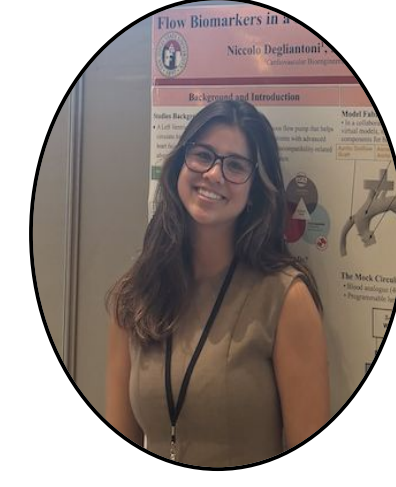
**Joshua Lange**  
ME Design Engineer Lead



**Brent Mullins**  
Manufacturing Engineer  
Lead



**Jonathan Wessel**  
ECE Team



**Jadyn Yamashita**  
ME Quality Engineer



**Ethan Quach**  
ECE Engineer



**John Flores**  
ECE Team



**Abdullah Dost**  
Safety Engineer

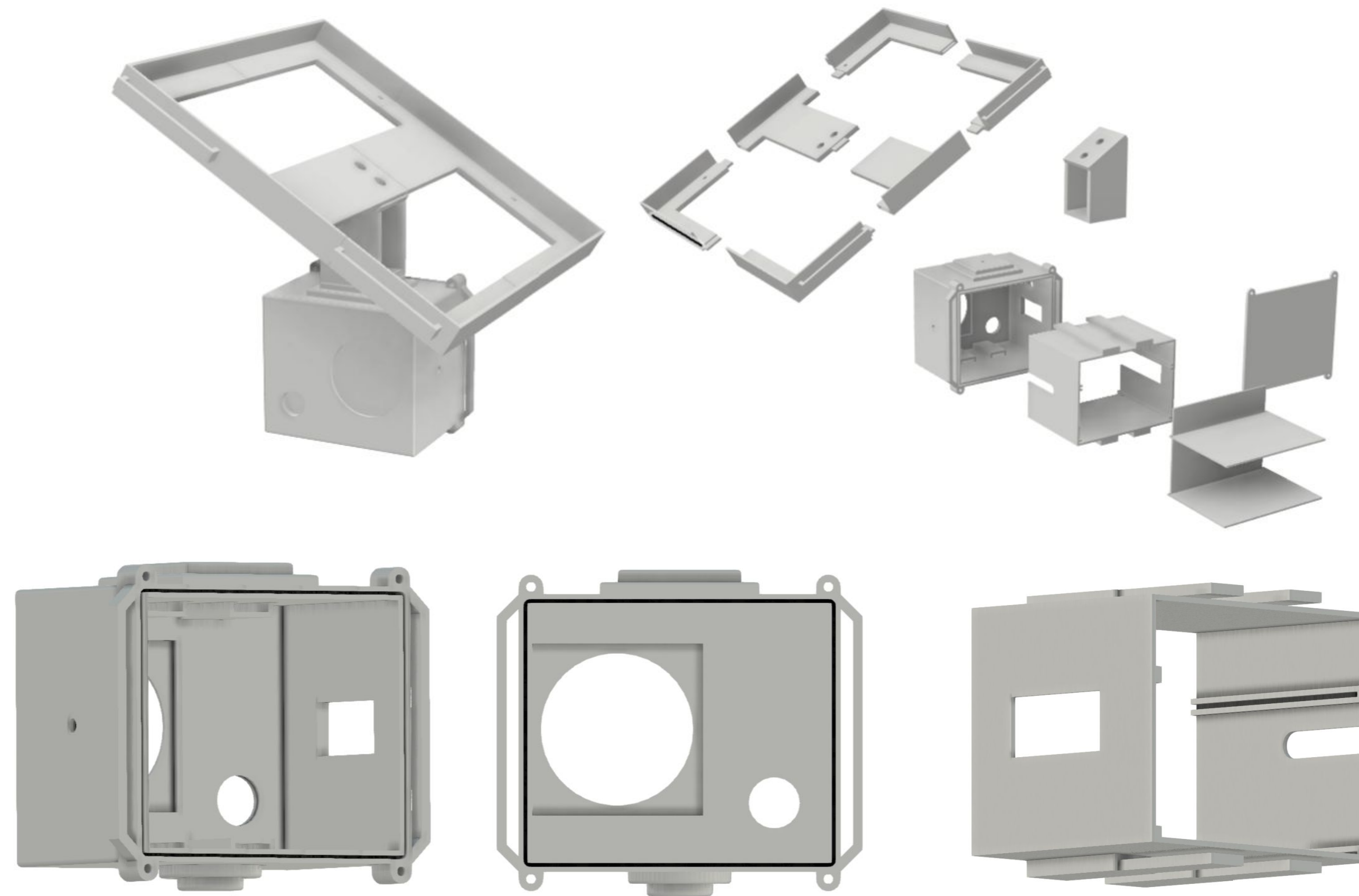
## Meet the Sponsor

The San Diego Zoo Wildlife Alliance is an international nonprofit conservation organization dedicated to protecting wildlife and ecosystems through an integrated approach that combines wildlife health and care, scientific research, and education. By leveraging this multidisciplinary framework, the organization develops sustainable, science-driven solutions to support biodiversity and the long-term survival of species worldwide.

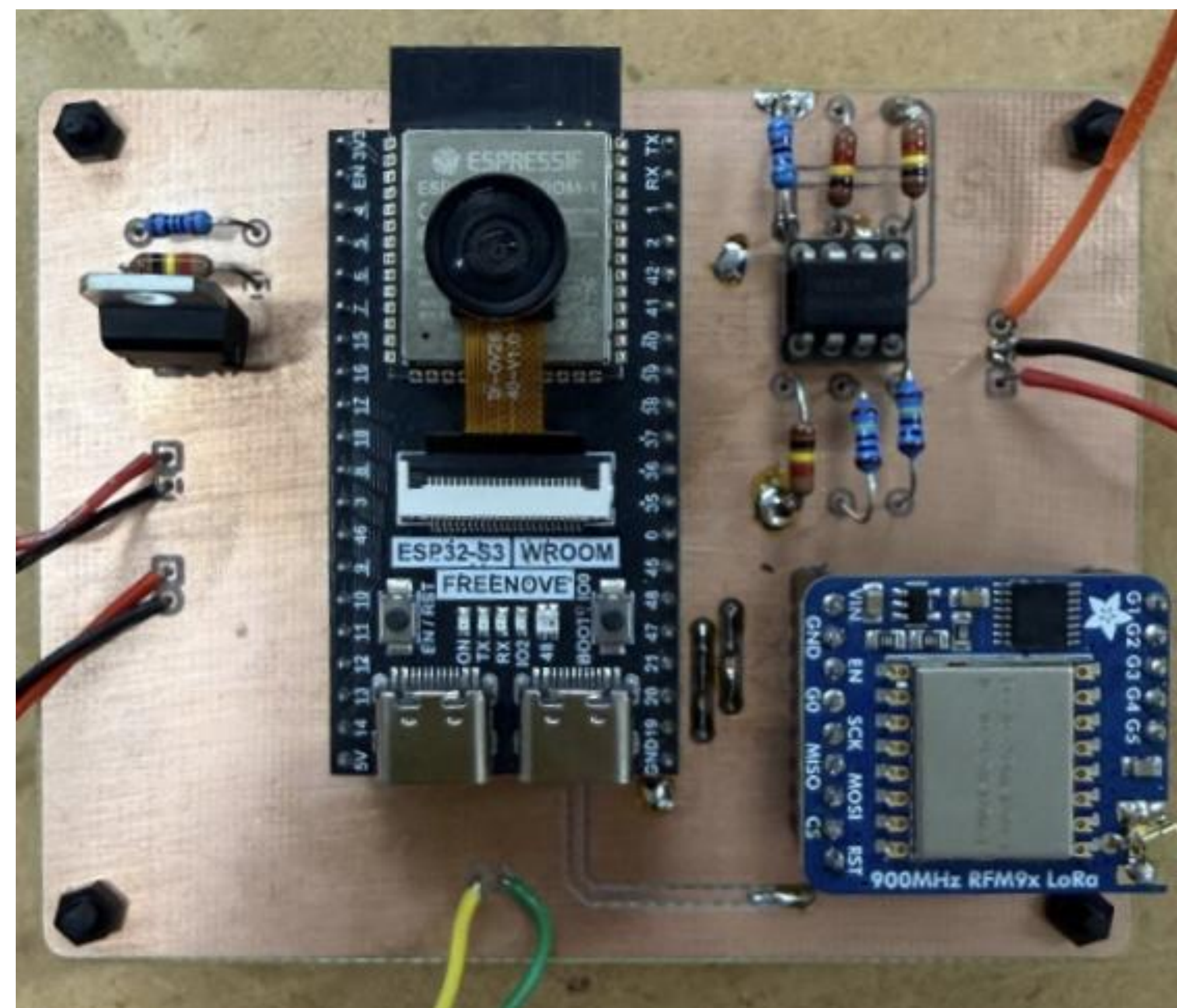
## Acknowledgements

The team thanks Dr. Shaffer, Dr. Paolini, and Professor Dorr for arranging and advising this project. In addition, the team thanks Katie Garwood for her constant support and mentorship with the challenges faced throughout the development.

## CAD Assembly



## Electrical Configuration

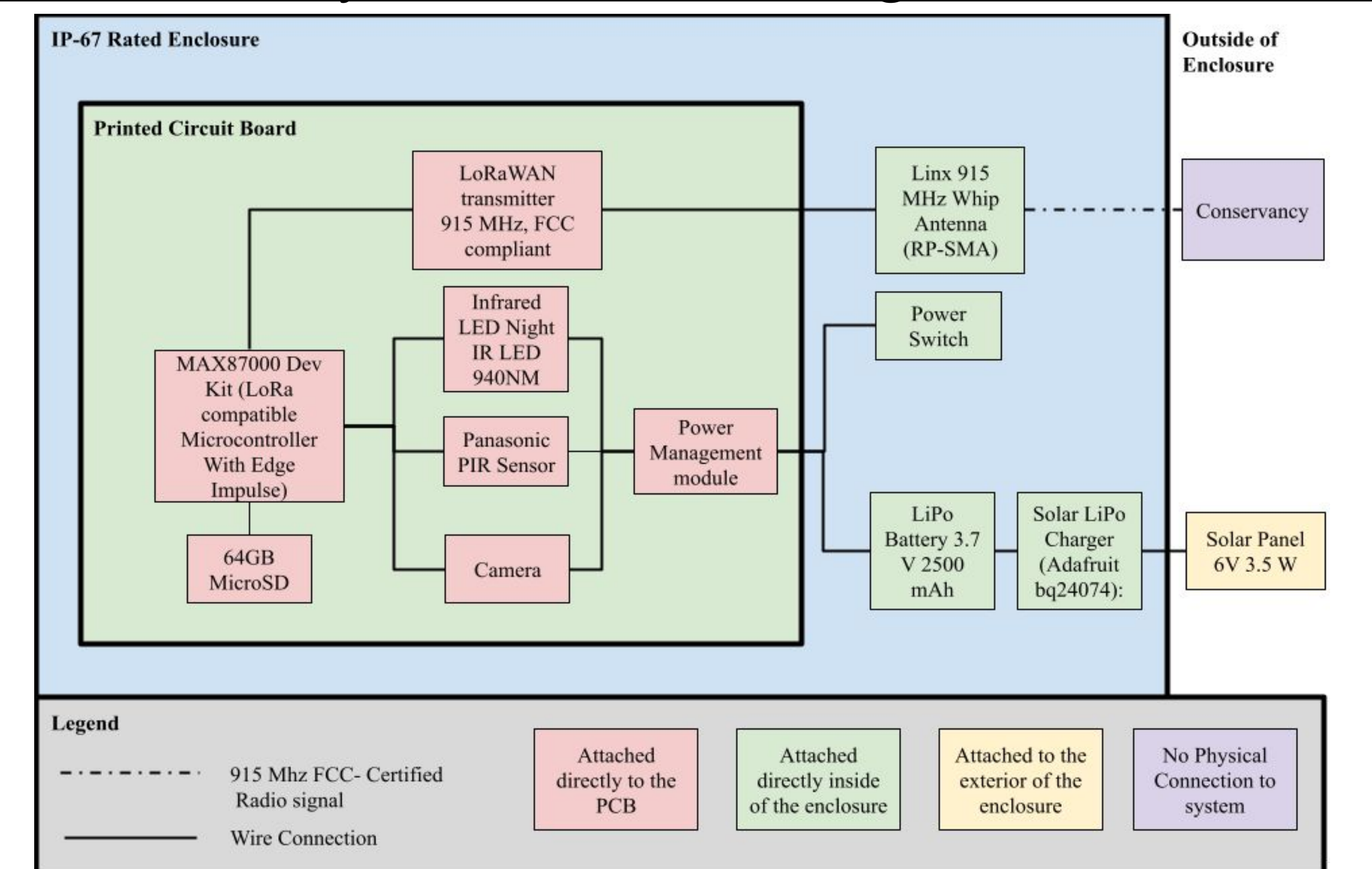


## Project Overview

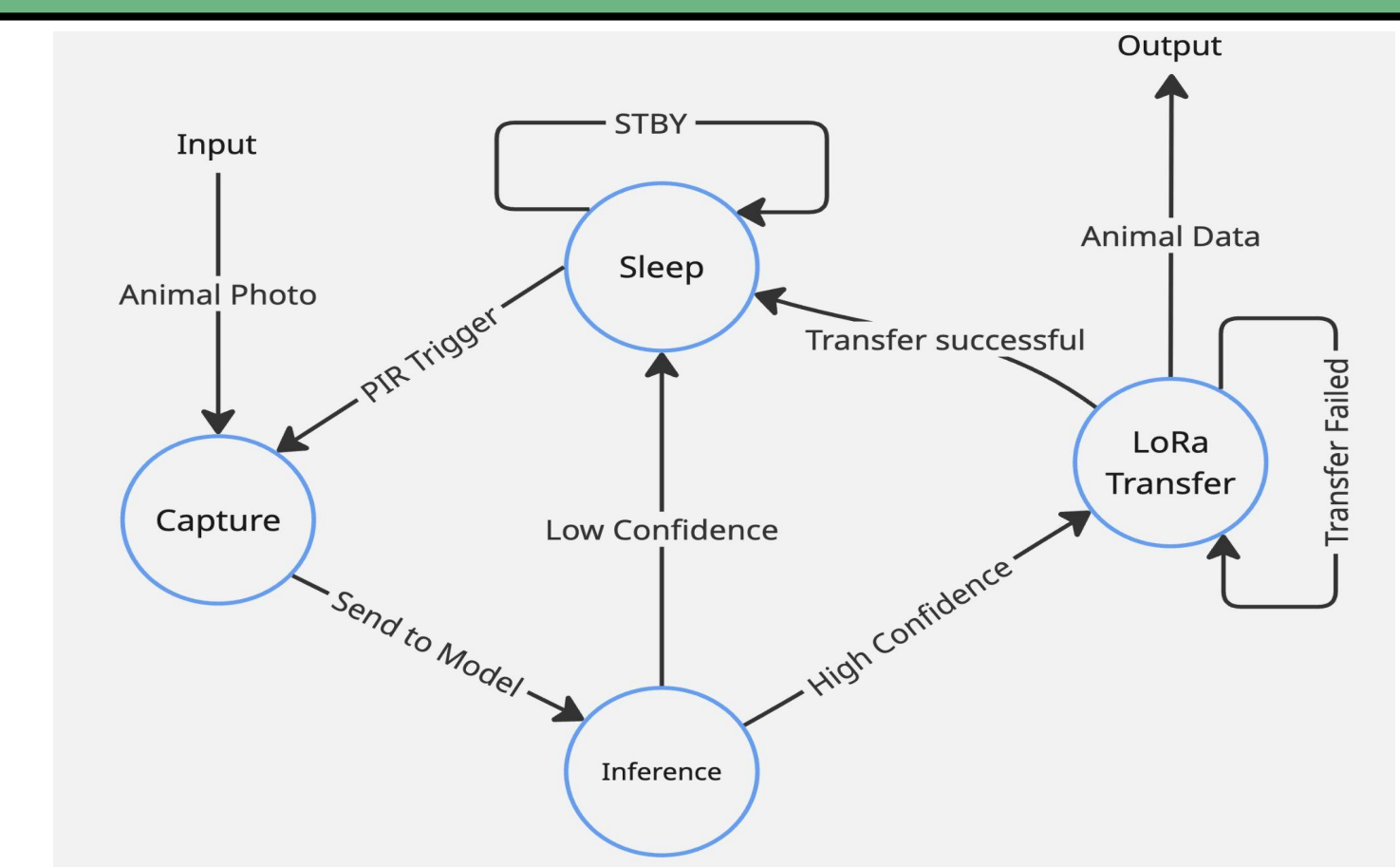
**Motivation:** Monitoring Black Rhinos in the Loisaba Conservancy is challenging due to limited access, harsh conditions, and unreliable, power-hungry camera traps.

**Need:** Develop the tinyScrubCam, a LoRa-capable camera trap for the San Diego Wildlife Alliance that captures day and night images, identifies animals using an Edge Impulse model, and transmits key data via LoRa. The solar-powered device must manage energy efficiently and be rugged enough for Kenya's outdoor conditions.

## System Level Diagram



## Software Flow



## Manufacturing & Testing



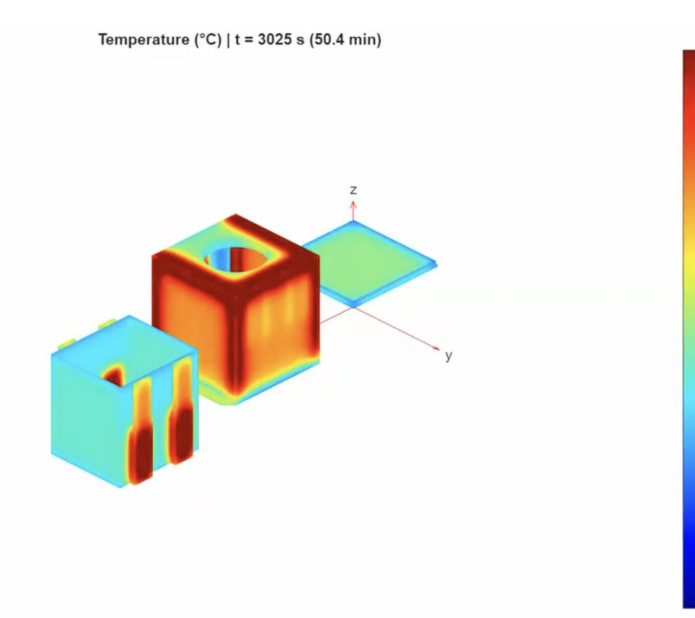
Printing Enclosure



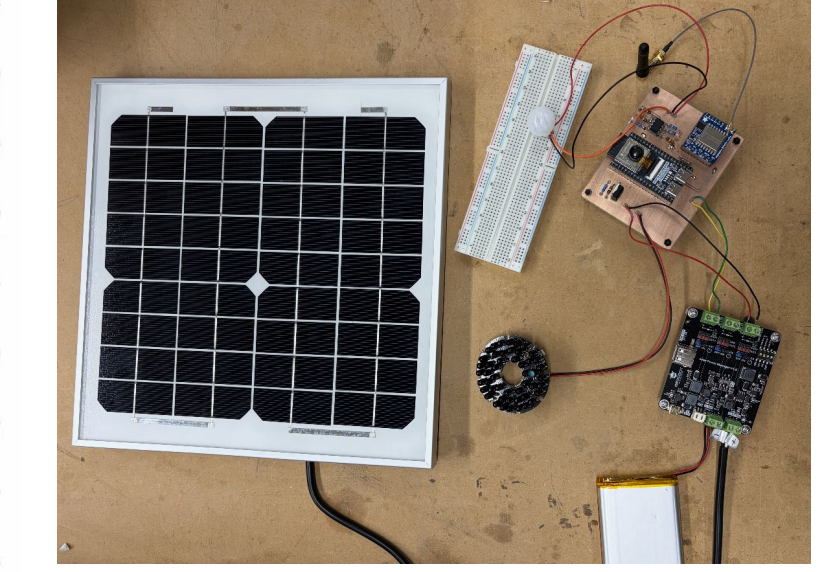
AI + Camera Testing



Completed Enclosure



Heat Enclosure Analysis



Full System Integration

