

Artifact ID: <b>ART-008</b>	Artifact Title: System Progress Overview
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Purpose: Outlines general system setup as well as problems to overcome in the future with potential proposed solutions.	

Revision History			
Revision	Revised by	Checked by	Date
01	Isaac Davies	Jonah Lowther	2025-01-30
02	Isaac Davies	Jonah Lowther	2025-01-31
03	Isaac Davies	Jonah Lowther	2025-02-03
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06	Isaac Davies	Jonah Lowther	2025-02-06
07	Israel Zenteno	Jonah Lowther	2025-02-07
08	Isaac Davies	Israel Zenteno	2025-02-11

# System Overview

High Altitude Drone

Low Altitude Drone

Ground Control

Legend

**Seek Thermal Mosaic Core Camera**

- Publishing images to ROS network
- Mount designed, printed, and attached

**Raspberry Pi 5 (Onboard Computer)**

- Receives and integrates Odometry and Images via ROS
- GUI for live feed, filter adjustments, and hotspots
- Connect to Ground Control via WiFi
- Using sim code, currently able to send GPS coordinate
- Confirm fire GPS coordinate in live test

**Airframe / Flight Controller**

- Publishing Odometry data to ROS Network
- QGroundControl working
- Manual Takeoff and Landing confirmed
- Automatic lawnmower path confirmed
- Post repair bench testing

**Airframe / Flight Controller**

- Publishing Odometry data to ROS Network
- QGroundControl working
- Manual Takeoff and Landing confirmed
- Testing automatic flight to waypoint
- Post-repair bench testing
- Feedback Loop - Shelved

**Raspberry Pi 5 (Onboard Computer)**

- Receives and integrates Odometry and Images via ROS
- GUI for live feed, filter adjustments, and hotspots
- Connect to Ground Control via WiFi
- Using sim code, currently able to identify direction of the fire
- Confirm fire direction in live test

**Seek Thermal Mosaic Core Camera**

- Publishing images to ROS network
- Mount designed, printed and attached

**Drop Mechanism**

- Designed, printed, and mounted on drone
- Compatible w/ multiple suppressants
- Can be triggered from Pi
- Test on live fire



- Represents Primary relationship
- - - - - Represents Backup relationship
- Functionality is working
- Not working/ Hasn't been tested
- Functionality is in progress
- Software Connection on drone
- == Wired Connection on drone