Aero FC System Release Version 1.0

System Architecture Design Document

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Table of Contents

[Broad System Design Goals 4](#_Toc7638109)

[Hardware Architecture 4](#_Toc7638110)

[Processor 4](#_Toc7638111)

[Sensors 4](#_Toc7638112)

[External Memory 4](#_Toc7638113)

[System IO 4](#_Toc7638114)

[Software Architecture 4](#_Toc7638115)

[Language Selection 4](#_Toc7638116)

[Design Paradigm 4](#_Toc7638117)

[Criticality 4](#_Toc7638118)

[Abstraction 4](#_Toc7638119)

[Isolation 4](#_Toc7638120)

[Core System Functionality 4](#_Toc7638121)

[State Predictor 4](#_Toc7638122)

[Control Law 4](#_Toc7638123)

[Data Logging 4](#_Toc7638124)

[Asserts 5](#_Toc7638125)

[User Input 5](#_Toc7638126)

[Resource Protection/Isolation 5](#_Toc7638127)

[Hardware 5](#_Toc7638128)

[Software 5](#_Toc7638129)

[System Dependencies 5](#_Toc7638130)

[Testing 5](#_Toc7638131)

[Criticality Level 5](#_Toc7638132)

[Low Level Hardware Drivers 5](#_Toc7638133)

[Component Modules 5](#_Toc7638134)

[Integration Tests 5](#_Toc7638135)

[Continuous Integration 5](#_Toc7638136)

[Compile Jobs 5](#_Toc7638137)

[Test Jobs 5](#_Toc7638138)

[Alerts 5](#_Toc7638139)

# Broad System Design Goals

System Release Version 1.0 is the first attempt at creating an infrastructure robust and capable enough to support a highly feature extensible drone flight controller system. For the current design iteration, this will look like a no-frills design that is capable of controlling a drone in nearly level flight conditions, with minor perturbations from the user controller. While this is technically a primarily software oriented design project, there are some other considerations that should be met as well, mostly in regards to testing, building, and quality assurance.

# Hardware Architecture

## Processor

## Sensors

## External Memory

## System IO

# Software Architecture

## Language Selection

## Design Paradigm

### Criticality

### Abstraction

### Isolation

## Core System Functionality

### State Predictor

### Control Law

### Data Logging

### Asserts

### User Input

## Resource Protection/Isolation

### Hardware

### Software

## System Dependencies

# Testing

## Criticality Level

## Low Level Hardware Drivers

## Component Modules

## Integration Tests

# Continuous Integration

Obviously Jenkins…Nightly builds anyone?

## Compile Jobs

## Test Jobs

## Alerts

# Software Management

## Branching

## Issues

## Reviews

## Documentation