TerraMICRO High Altitude Balloon Mission and System Requirements Specification

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I. Introduction

TerraMICRO is a high altitude balloon (HAB) technology demonstration mission. The key objectives of this mission are to validate a new HAB avionics architecture called HAB, experiment with core technologies which enable long duration flights, and collect high quality images from high altitudes.

This document shall list and describe all mission requirements and their criteria for success, all system requirements and their criteria for performance, and (when applicable) methods by which the aforementioned requiremnts shall be evaluated.

The intent of this specification is to quantify and control the criteria by which mission success is defined, and to provide traceability to each subsystem's performance to ensure mission success is achieved by the vehicle's design.

II. Mission Requirements

asdf.

III. System Requirements

All of the systems demonstrated by this mission shall be thoroughly tested on the ground prior to launch. Flight data and telemetry recorded during the flight should be consistent with behavior observed during testing.

IV. Nomenclature & Glossary

A	=	amplitude of oscillation
a	=	cylinder diameter
C_p	=	pressure coefficient
Cx	=	force coefficient in the *x* direction
Cy	=	force coefficient in the *y* direction
c	=	chord
dt	=	time step
Fx	=	X component of the resultant pressure force acting on the vehicle
Fy	=	Y component of the resultant pressure force acting on the vehicle
f, g	=	generic functions
h	=	height
i	=	time index during navigation
j	=	waypoint index
K	=	trailing-edge (TE) nondimensional angular deflection rate