Ukpik-1

*DOCUMENT TITLE*

REVISION NUMBER: *0.1*

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**Document Change Record**

|  |  |  |  |
| --- | --- | --- | --- |
| Issue | Date | Changes Made | Name |
| 0.1 | YYYY-MM-DD | First Draft | Last Name, First Names |
|  |  |  |  |
|  |  |  |  |

**Reference Documents**

*Insert applicable reference document titles, such as requirements documents*

**Terms, Definitions, Abbreviations**

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| --- | --- |
| CSA | Canadian Space Agency |
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# Requirements

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| --- | --- | --- |
| **Requirement ID** | **Requirement Description** | **Parent Requirement** |
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# Mass Budget

*Complete mass budget and demonstrate sufficient margin*

# CubeSat Configuration

*3D renderings of CubeSat, whole and expanded view of structure showing coordinate system, rail, switches, rework access*

# Architecture and Interface Diagrams

*2D mechanical design drawings showing key dimensions and interfaces; solar panel design*

*Block diagram schematic to show internal interface connections and external interface connections. Label data connections with signal paths, connector types, protocols, etc. Label power connections with current flow paths, voltages, connector types, etc. Identify physical connection points with connector, screw type, adhesive type, etc.*

*Complete mechanical layout showing clearly the deployment switches location, mounting strategy together with RBF pin and CubeSat envelop*

# Functional Operations

*Provide a functional block diagram or state diagram with description of how the subsystem operates, including state transitions with input and output triggers*

*Complete design of deployable antenna and mechanisms including release plan after ISS deployment*

# Design Analysis

*Provide centre of gravity determination*

*Provide analysis to support design of mechanical subsystem*

# Manufacturing, Assembly, and Integration Plan

*Complete manufacturing and acquisition plan*

*Provide a step-by-step walkthrough of how the subsystem will be assembled and integrated with the CubeSat*

*Identification of mechanical ground support equipment*

# Test and Verification Plan

*Provide a step-by-step test and verification plan, including equipment needed and what results in a passing test*

*Requirement verification strategy: Take the subsystem requirements and identify how that requirement will be verified to have been met, and identify the necessary equipment or resources to complete that verifications*

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| **Requirement ID** | **Verification Strategy** | **Resources** |
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# Schedule and Work Plan for Phase C2 and D

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| **Task Description** | **Estimation of Time and Human Resources** | **Required Resources to Complete** |
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*Provide a description of the work that remains to be completed to complete the detailed design process. Provided an estimated time required to complete that work. Provide an estimate on the time and schedule for completing the testing, verification, assembly, and integration.*

# Datasheets for COTS Components

*Attach any datasheets or spec sheets for identified COTS components*