Ukpik-1

*DOCUMENT TITLE*

REVISION NUMBER: *0.1*

DATE: *YYYY-MM-DD*

COMPILED BY: *Name*

CONTRIBUTIONS FROM: *Names*

**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**

|  |  |
| --- | --- |
| CSA | Canadian Space Agency |
|  |  |
|  |  |
|  |  |
|  |  |

Contents

[Requirements 1](#_Toc45785185)

[Architecture and Interface Diagrams 1](#_Toc45785186)

[Functional Operations 1](#_Toc45785187)

[Functional Analysis 1](#_Toc45785188)

[Software Development Plan 1](#_Toc45785189)

[Assembly and Integration Plan 2](#_Toc45785190)

[Test and Verification Plan 2](#_Toc45785191)

[Schedule and Work Plan for Phase C2 and D 2](#_Toc45785192)

[Datasheets for COTS Components 3](#_Toc45785193)

# Requirements

|  |  |  |
| --- | --- | --- |
| **Requirement ID** | **Requirement Description** | **Parent Requirement** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Architecture and Interface Diagrams

*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.*

# 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*

# Functional Analysis

*Provide an estimation for the processing load and margin, with justification for the estimation*

# Software Development Plan

*Walk through of the software development including bootloader*

*Description of software development tools, language and configuration management*

# Assembly and Integration Plan

*Describe the umbilical interface design for OBC direct access during AIT phase*

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

# Test and Verification Plan

*Provide detailed description and walk through of the end-to-end software test 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*

|  |  |  |
| --- | --- | --- |
| **Requirement ID** | **Verification Strategy** | **Resources** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Schedule and Work Plan for Phase C2 and D

|  |  |  |
| --- | --- | --- |
| **Task Description** | **Estimation of Time and Human Resources** | **Required Resources to Complete** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

*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*