**Requirement Analysis Document**

**Subsystem:** Parachute Deployment System

**Last date of revision:** 01-02-2023

**Document status:** Draft

***Abbreviations:***

***PDS - Parachute Deployment Systems***

***CPM - Central Processing Module***

**Purpose of the subsystem:**

PDS deploys the parachute while falling back after reaching the apogee.

| **Type** | **Requirement** | **Priority** |
| --- | --- | --- |
| **(Functional, Technical, Operational)** | **(Core, Essential, Desired)** |
| Functional | Deploy the onboard parachute to recover the rocket after reaches the apogee and during emergency failsafe deployment. | Core |
| Functional | Effective actuation method to avoid deployment failure | Core |
| Functional | Update the system status to the ground station | Desired |
| Operational | Share the PDS status with CPM including any fault status | Desired |
| Operational | Trigger the deployment actuator when commanded by CPM | Core |
| Technical | The actuator/igniter should be powered by the onboard power system | Core |
| Technical | A sensing unit inside the PDS should detect and communicate the deployment status to the CPM | Desired |

Subsystem model:

*Revision history:*

*1. First draft completion- 01/02/2023*