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PAYLOAD INTERFACES AND DRAFT USER'S GUIDE

Payload User's Guide

- Currently in draft form and will be further developed as the mission details solidify
- Final version will be released with the Announcement of Opportunity (AO)

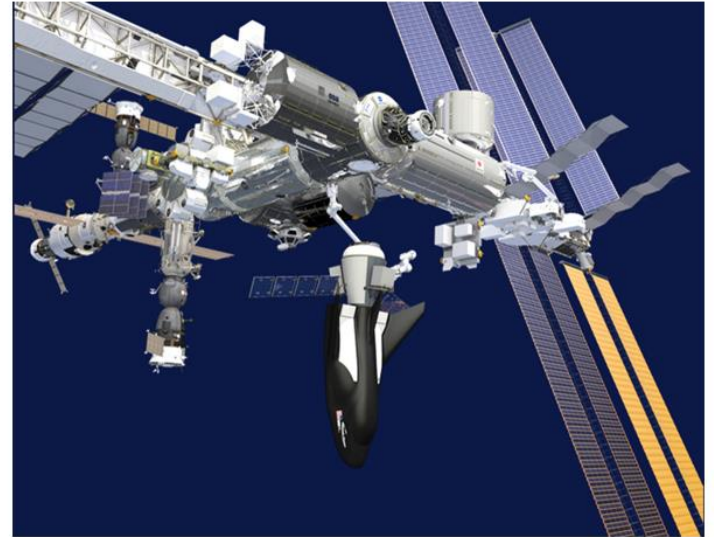
TABLE OF CONTENTS

| | | |
|-------|---|----|
| 1.0 | Purpose | 1 |
| 2.0 | Reference Documents | 2 |
| 3.0 | Introduction | 3 |
| 4.0 | Pressurized Payload and Cargo Interfaces | 4 |
| 4.1 | Payload and Cargo Accommodations | 4 |
| 4.2 | Structural Interface [Both UDC and Cargo Module (CM)] | 4 |
| 4.2.1 | Locker Structural Interface Fasteners Selection | 4 |
| 4.2.2 | Locker Structural Interface Fastener Tension | 5 |
| 4.2.3 | Soft Cargo Structural Interface (Volume) | 9 |
| 4.2.4 | Soft Cargo Structural Interface (Mass) | 9 |
| 4.2.5 | Payload Coordinate Frame | 9 |
| 4.3 | Late Load Cargo | 11 |
| 4.4 | Access Due to Launch Scrub | 11 |
| 4.5 | Post-Return Early Access | 12 |
| 5.0 | Power Interface | 12 |
| 5.1 | Voltage Range | 12 |
| 5.2 | Maximum Power | 12 |
| 5.3 | Power Connections | 12 |
| 5.4 | Overload Protection | 13 |
| 5.5 | Power Isolation for Multiple Feeds | 13 |
| 5.6 | Bonding/Grounding | 13 |
| 5.6.1 | Primary Payload Power Connector Bond | 13 |
| 5.6.2 | UDC to Payload Mated Surface Bond | 13 |
| 6.0 | Thermal/Fluid Interfaces | 14 |
| 6.1 | Thermal | 14 |
| 6.2 | Fluids | 14 |
| 7.0 | Communication and Data Interface | 14 |
| 7.1 | Communication Standard | 14 |
| 7.2 | Data Interface | 14 |
| 7.3 | Payload Health and Status | 14 |

General Content of the User's Guide

- Pressurized Payload and Cargo Interfaces
 - Structural and Mechanical
 - Power
 - Thermal/Fluid
 - Communication and Data
 - Emergency Caution and Warning
- Loads and Environments
- Payload Orientations
- Externally Mounted Payloads
- Satellite Deployments
- Ground operations
- Safety consideration

Dream Chaser Payload User's Guide Dream Chaser Advanced Development

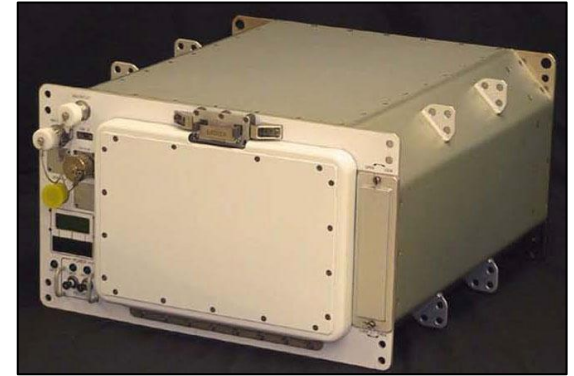


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Internal Powered Payloads (Dream Chaser & Dream Chaser with Cargo Module)

| Name | Outside Dimensions – LxWxH in (cm) | Maximum Mass lbm (kg) | Power (W) |
|---------------|---|--------------------------|-----------|
| Single Locker | 20.32 x 18.125 x 10.757 (51.6 x 46.0 x 27.3) | 72 (32.66) | 75 |
| Double Locker | 21.06 x 18.12 x 21.88 (53.5 x 46.0 x 55.6) | 140 (63.50) | 150 |

- Multiple locker orientations available depending on final manifest
 - Variety of launch and reentry loads
- Commanding and data recording available to each payload
 - Size and frequency determined based on final manifest
- Thermal control options available for forced air or payload fans
- Options to integrate multiple payloads into a locker like Ice Cubes



Internal Unpowered Payloads (Dream Chaser)

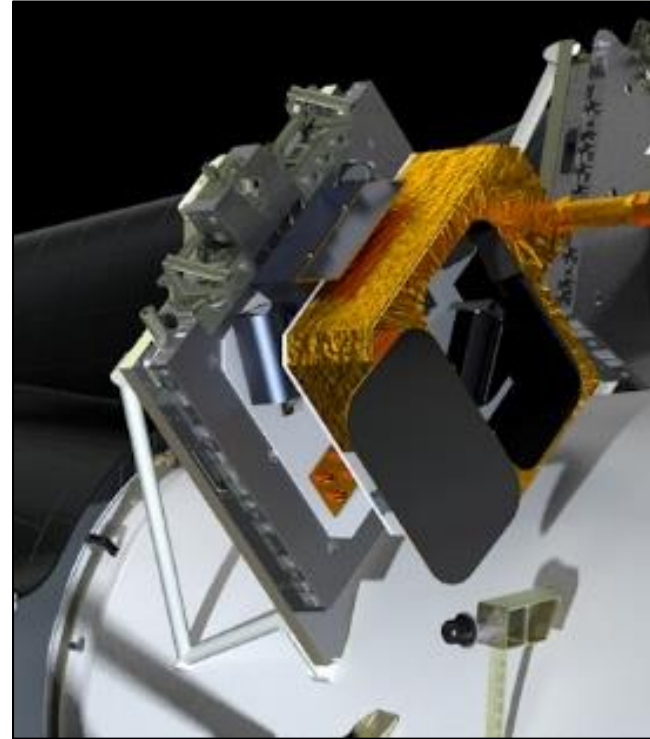
| Name | Outside Dimensions – LxWxH in (cm) | Maximum Mass lbm (kg) | Power (W) |
|------------|--|-----------------------|-----------|
| Single CTB | 19.75 x 16.75 x 9.75 (50.2 x 42.5 x 24.8) | 60 (27.24) | 0 |

- Multiple CTB orientations available depending on final manifest
 - Variety of launch and reentry loads
- Commanding and data recording not provided
- The CTB may contain small electronics and low-energy batteries provided by the developer
- No active thermal control
- This option is for any passive experiments that need exposure to microgravity



External Powered Payloads (CM)

- A standard plate interface will be defined that each Payload can mount to
- Regulated Power will be provided
 - Total wattage and duty cycle will be determined upon mission and payload needs
 - 28V or 120V available
- Commanding and data recording available to each payload
 - Size and frequency determined based on final manifest
- Thermal control will be responsibility of the Payload



Satellite Deployments (Cargo Module)

- CubeSats
 - Deployer not yet selected for Mission
 - Will publish ICD/User's Guide with Announcement of Opportunity
 - Launch in an 'off' mode
- Micro-Satellites
 - Interface and deployment system will be designed with each satellite
 - Launch in an 'off' mode

