

QB50 Deployment System

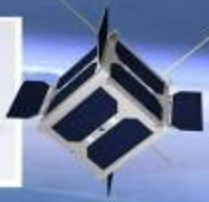
VKI - 28th of January 2013

C. Bernal

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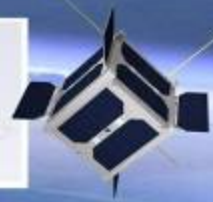


Contents



- **Requirements & Constraints**
- **LVs Envelope**
- **Configuration**
- **Derisk Prototype**
- **Precursor Flight Deployer**
- **QB50 Deployer**
- **Misc**





- **Requirements & Constraints**

- LVs Envelope

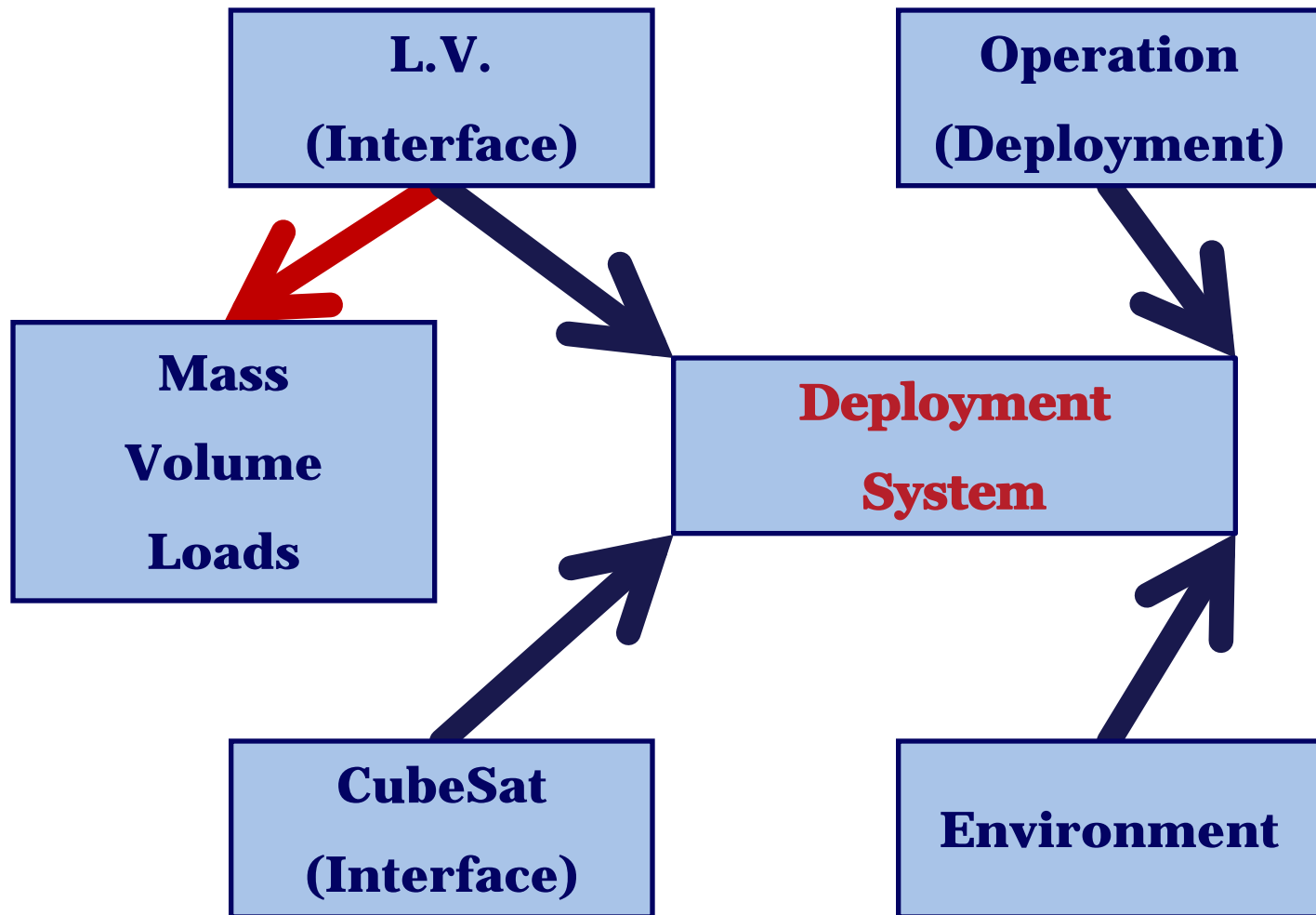
- Configuration

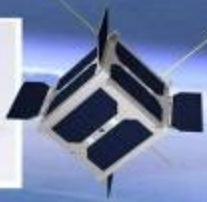
- Derisk Prototype

- Precursor Flight Deployer

- QB50 Deployer

- Misc





- **Requirements & Constraints**

Customized design w.r.t.

- QB50 LV and CubeSats
- **Gossamer-1**

- **LVs Envelope**

- **Configuration**

Optimized design w.r.t.

- Mass
- Volume
- Accessibility/Connection

- **Derisk Prototype**

- **Precursor Flight Deployer**

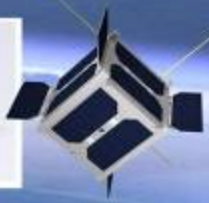
- **QB50 Deployer**

Flexible deployment

- Configuration
- Sequence
- Dynamics

- **Misc**

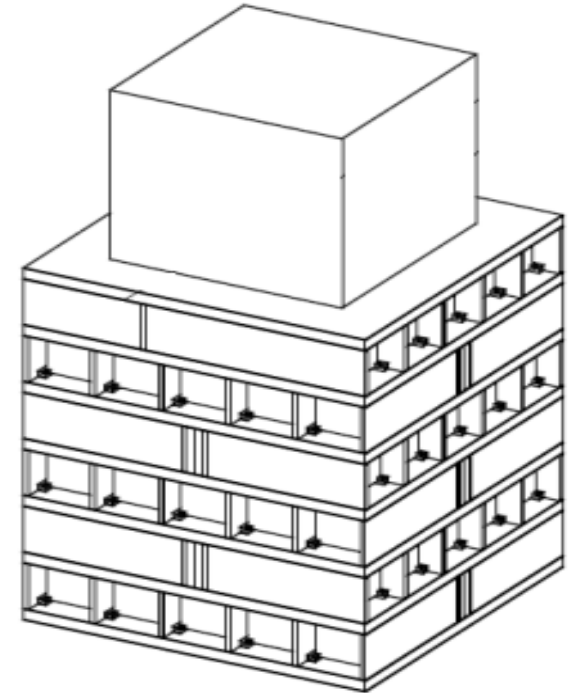


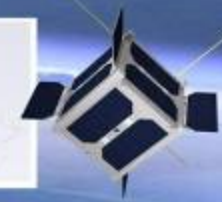


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Base-line Flight Configuration:

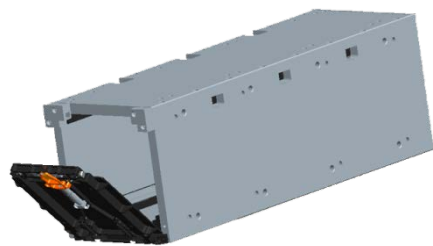
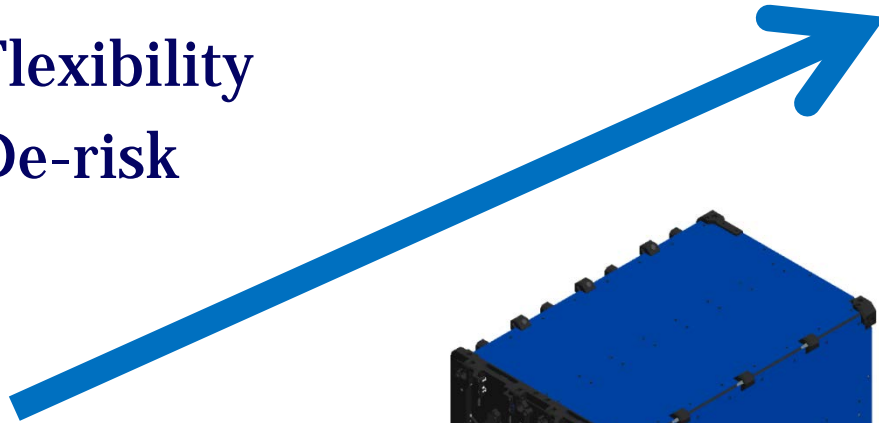
- **40 x 2U** CubeSats 'atmospheric'
- **10 x 3U** CubeSats 'science/technology demo'
- **Gossamer-1** solar sail demo





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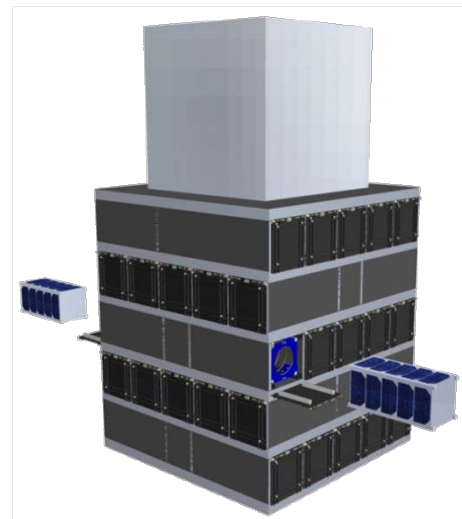
- Flexibility
- De-risk



De-risk Concept
Prototype
2012

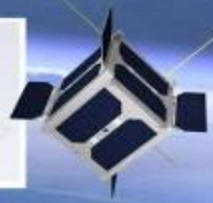


Precursor
Flight
2013



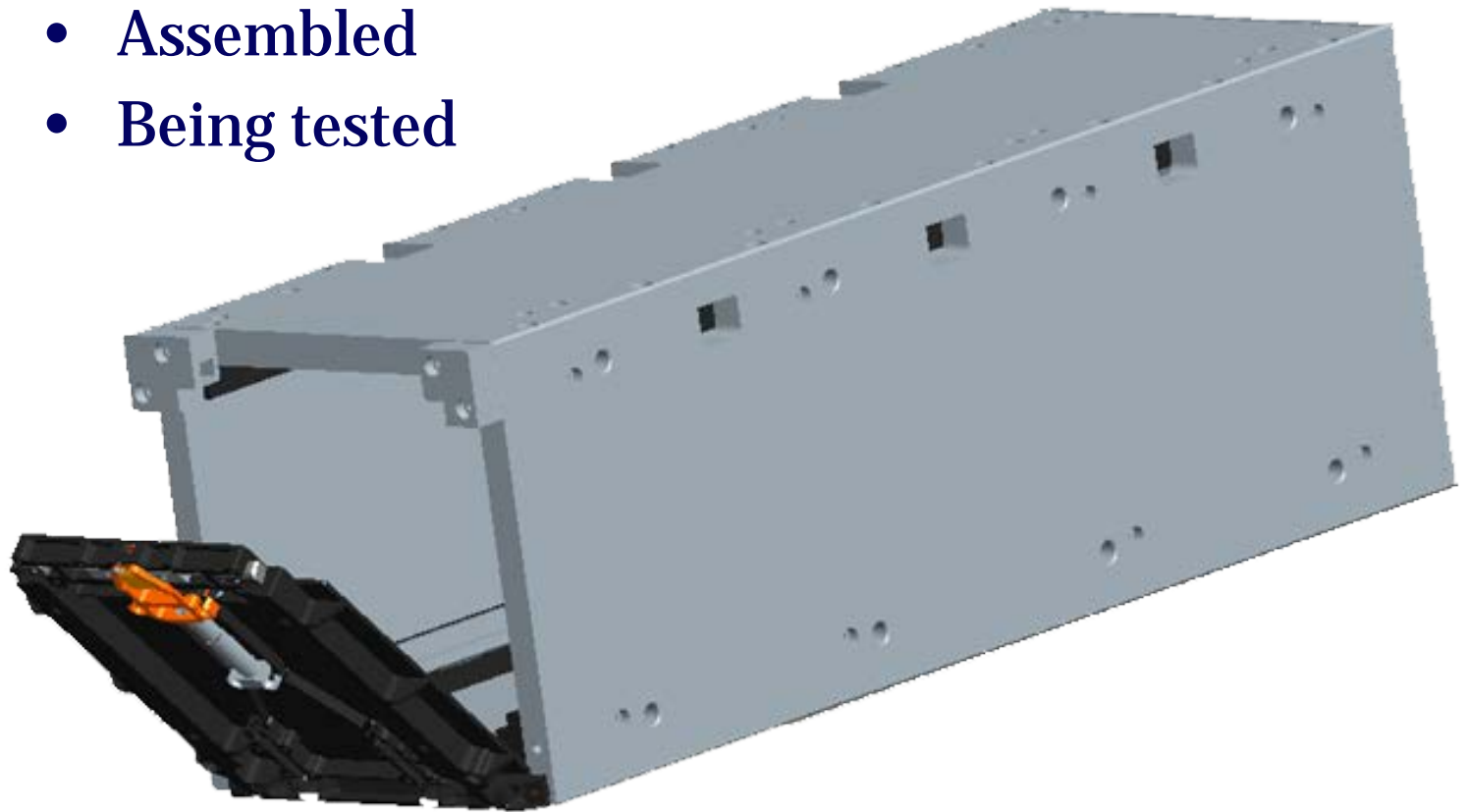
QB50

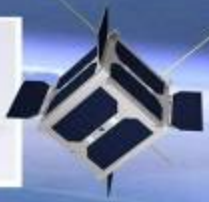




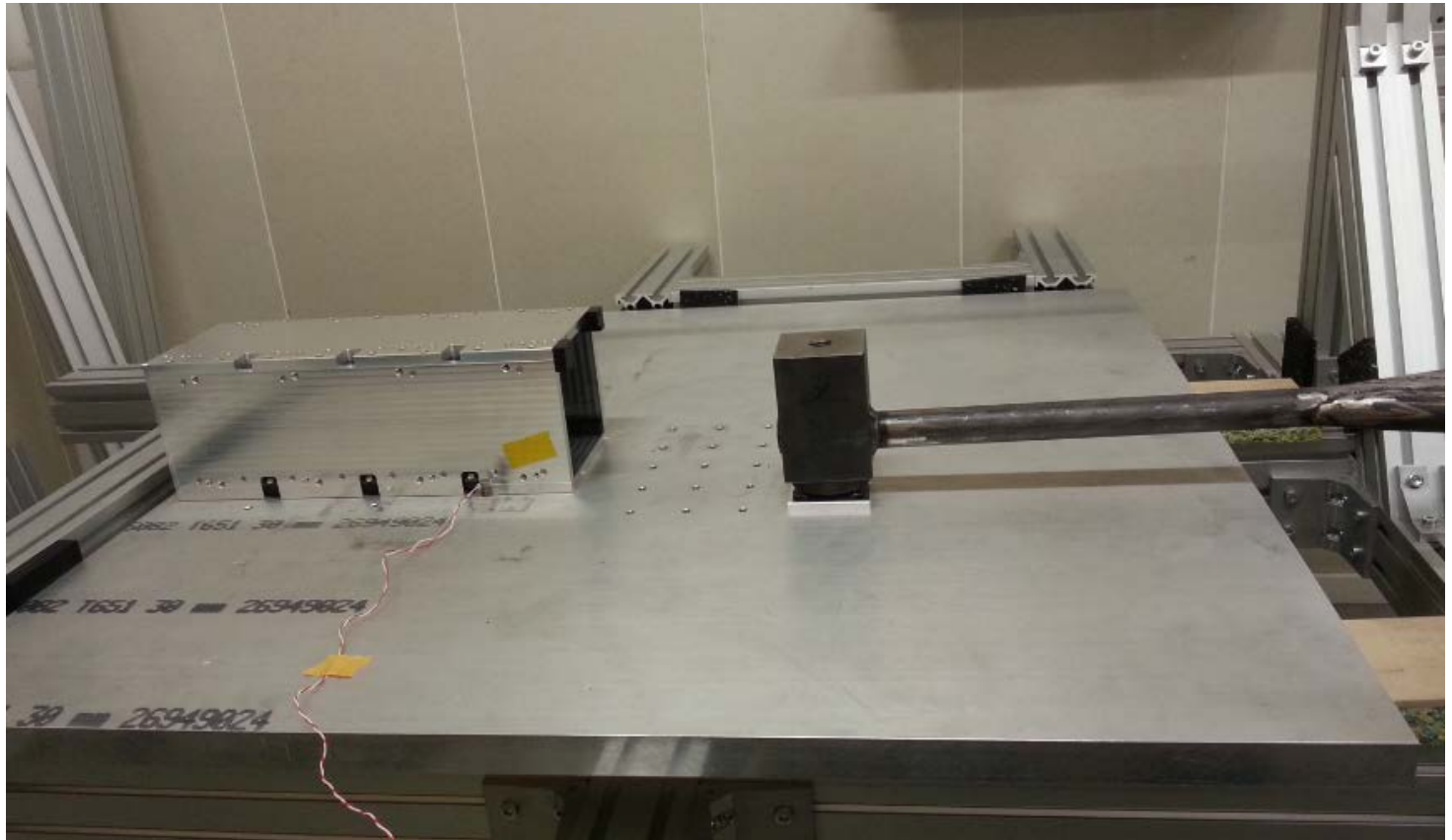
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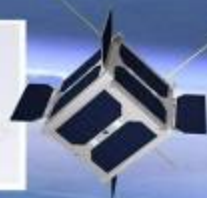
- Designed
- Produced
- Assembled
- Being tested



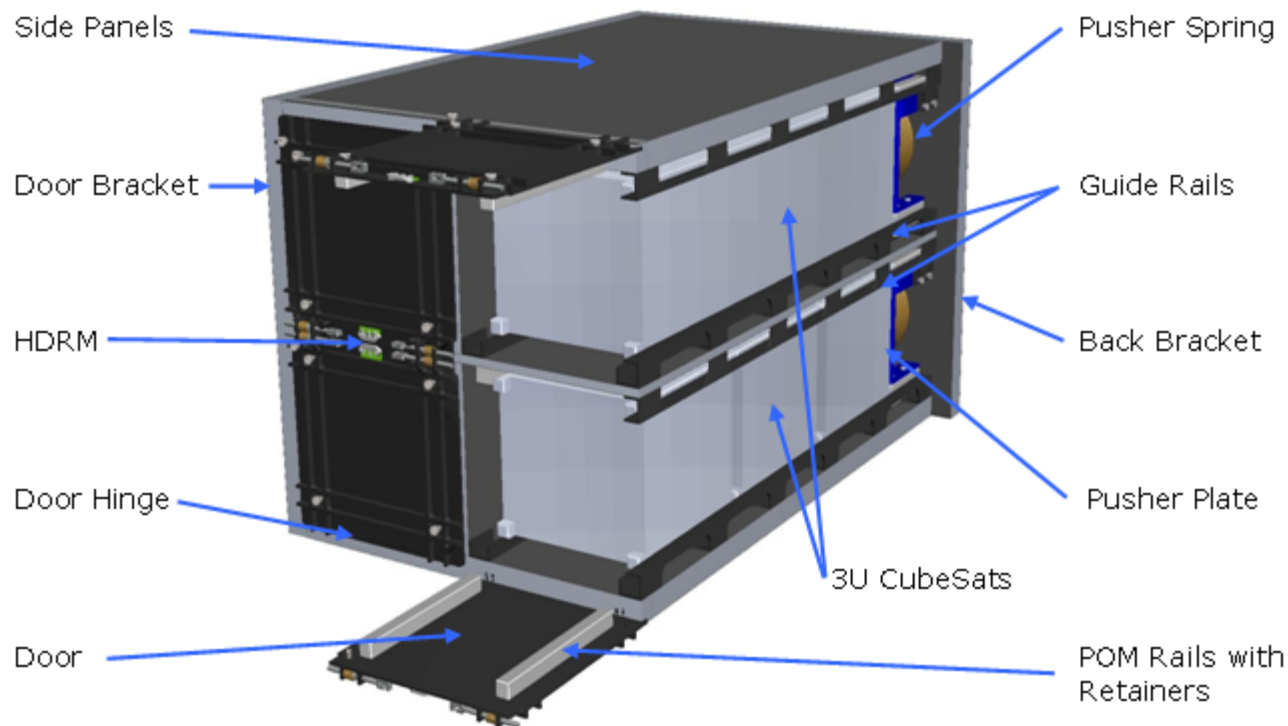


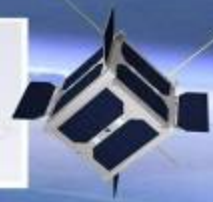
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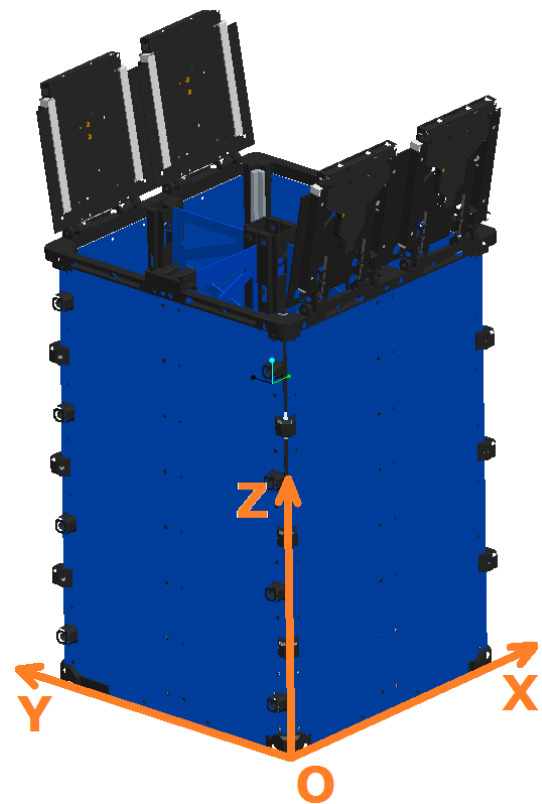
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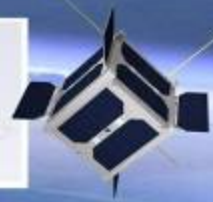




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- Designed
- To be Produced/Tested
- Mass = 6kg
- Volume = 30lt
- Size = 403 x 272 x 272mm





- Requirements & Constraints

- LVs Envelope

- Configuration

- Derisk Prototype

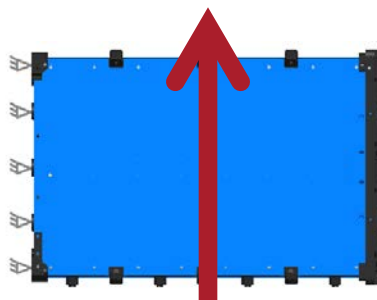
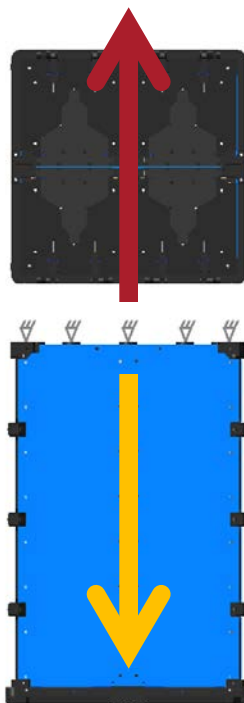
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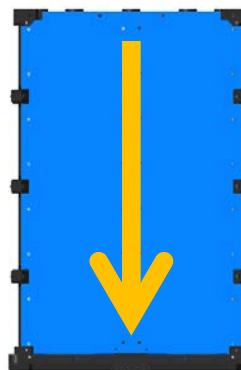
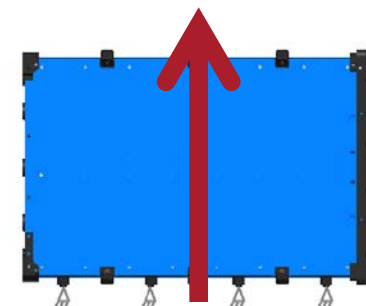
- Misc

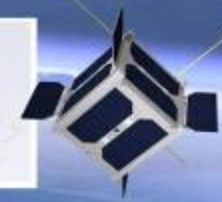


• Back-plate



• Bottom-rails





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Performances

- Mass = 100kg
- Volume = 550lt
- Size = 750 x 850 x 850mm

Functionalities

- OBC
- Radio
- Batteries
- Solar Panels

