



HatchBasket

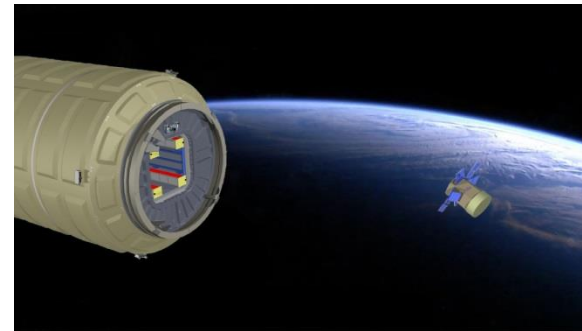
System for ISS-Enabled SmallSat Deployments
and Externally-Hosted Tech Demo Payloads

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Altius Introduction

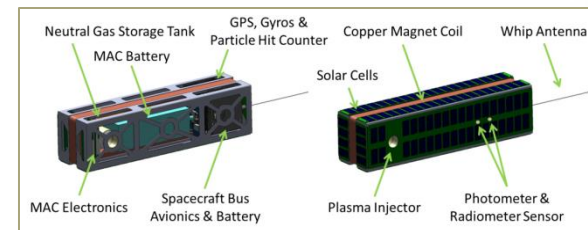
1. Space Logistics



2. Space Robotics

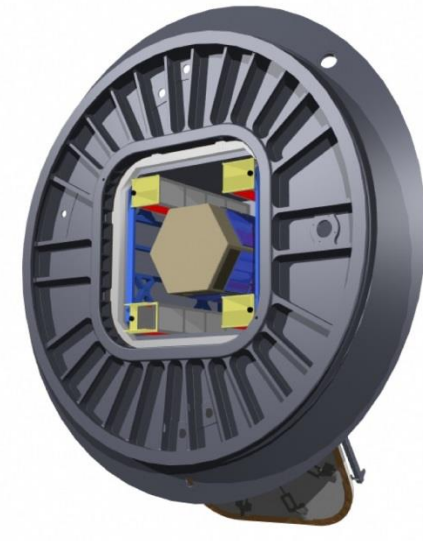
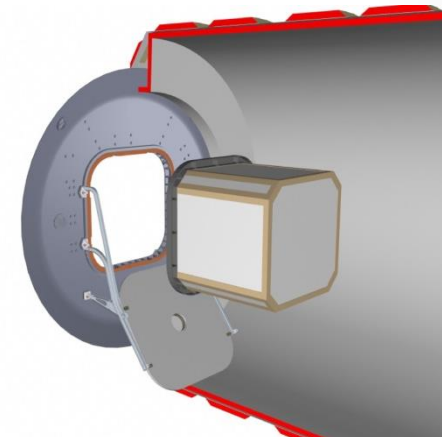


3. Aerocapture Technologies

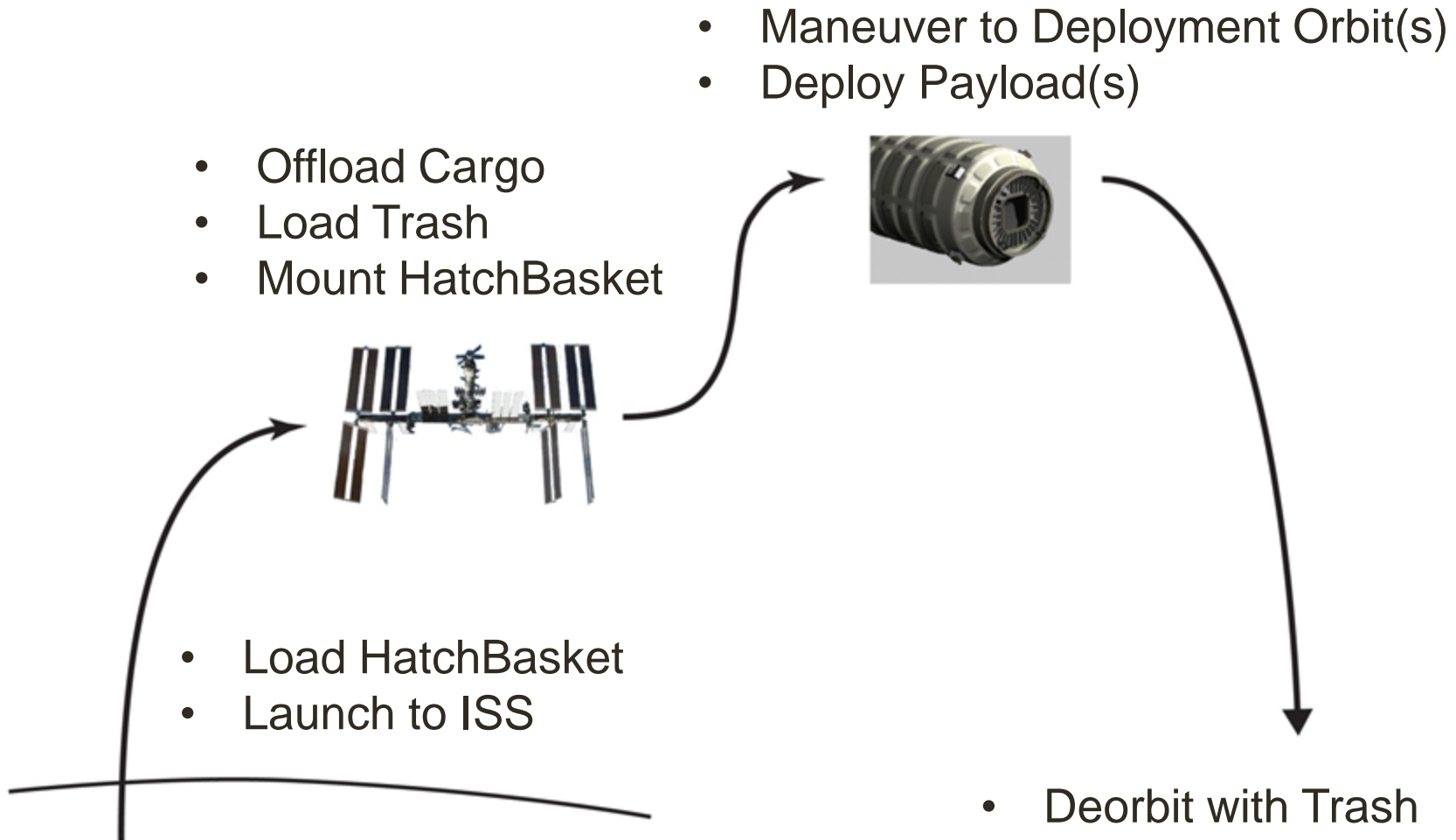


HatchBasket Introduction

- SmallSat deployer carrier structure that mounts in the hatchway of ISS Cargo Vehicles
 - Mounted in lieu of pressure hatch immediately prior to ISS departure
 - Launched as pressurized cargo
- Carries a configurable mix of CubeSat/MicroSat payloads
 - Up to 40X 3U CubeSats or 1X Full ESPA-class payload

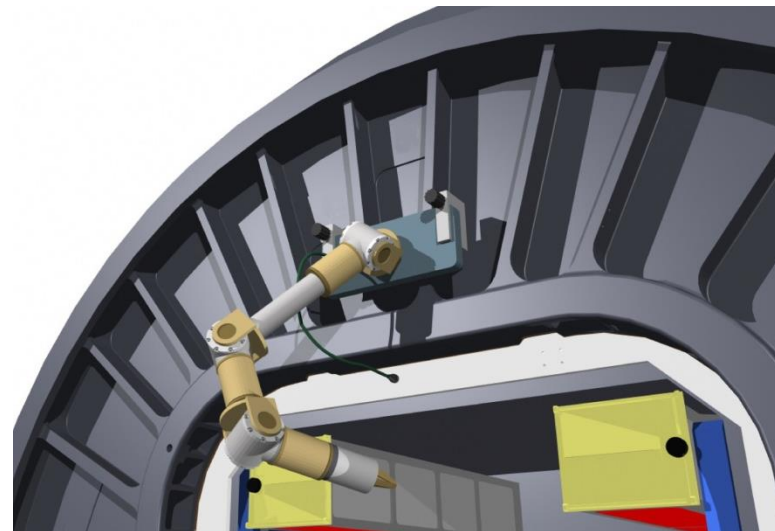
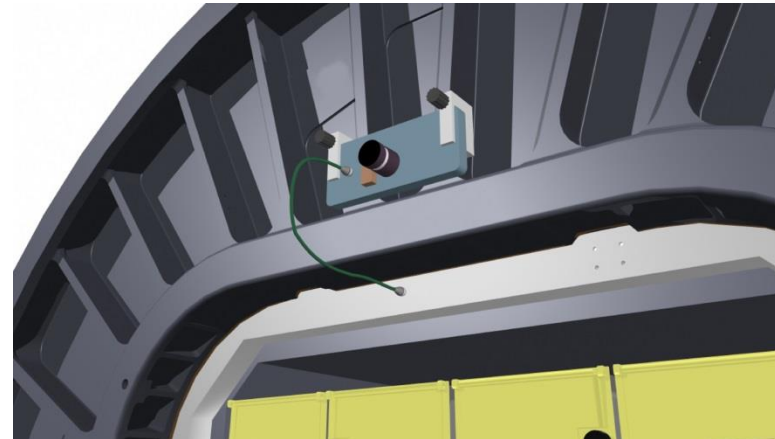


Notional HatchBasket CONOPS



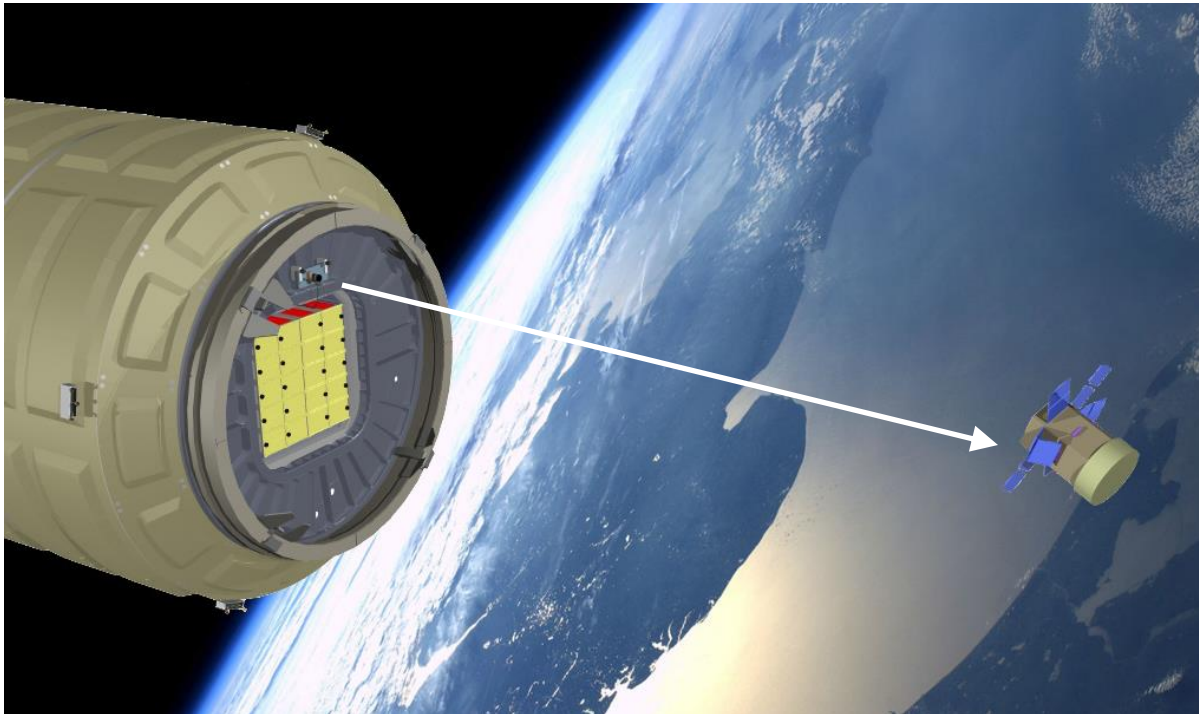
Hosted Payloads and Services

- HatchBasket control avionics can also support externally mounted systems
 - Cameras
 - Sensors
 - Communications Systems
 - Robotic Manipulators
- Either as a hosted-payload platform or as support equipment for deployed payloads



Hosted Service Concepts: Chase Plane

- Cargo Vehicle follows Payload(s) post-deployment and observes with a HatchBasket-hosted sensor suite
- Enables standoff observation of CubeSats/MicroSats



Key Benefits

1. Flexible mix of payload sizes
 - 1U CubeSats to full ESPA
 - Can support taller MicroSats than will fit through JEM airlock
 - Elevator/Deployer system for encapsulating MicroSat payloads
2. Flexible deployment orbits (up to 500km altitude)
 - 2-5X Longer lifetime than directly ISS-deployed payloads
 - Or deployment in low elliptical orbits for reentry tech demos
3. Enhanced missions using hosted sensors/robotics
 - Robotic assembly of modular payloads
 - Observation of spacecraft deployment events
 - Multi-spectral observation of plasma devices
 - Not just “fire and forget” deployments



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SmallSat Booth Number: **132T**