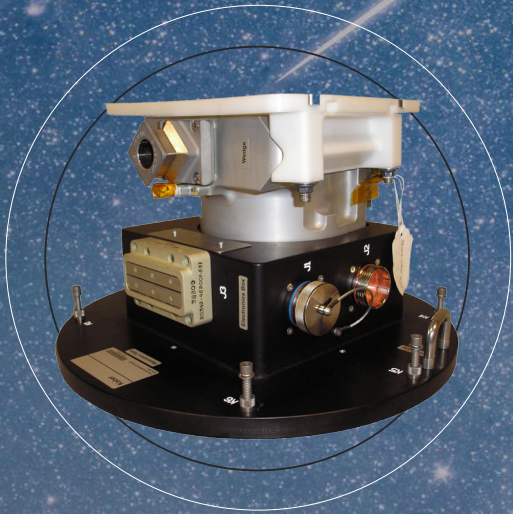


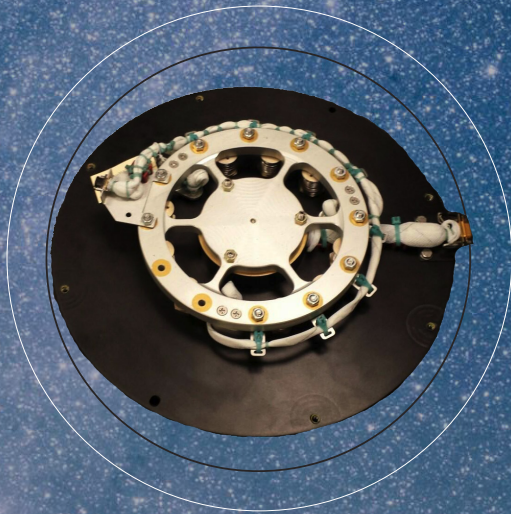
# KABER



## NANORACKS ISS MICROSATELLITE DEPLOYMENT SYSTEM



MISSION-1 FLIGHT UNIT



MISSION-1 NRSS FLIGHT UNIT

## NRSS

NanoRacks Separation System

Alternative to Lightband  
Separation System

Fabricated specific to mission  
requirements

First use of ISS MMS (SPDM) by  
NanoRacks

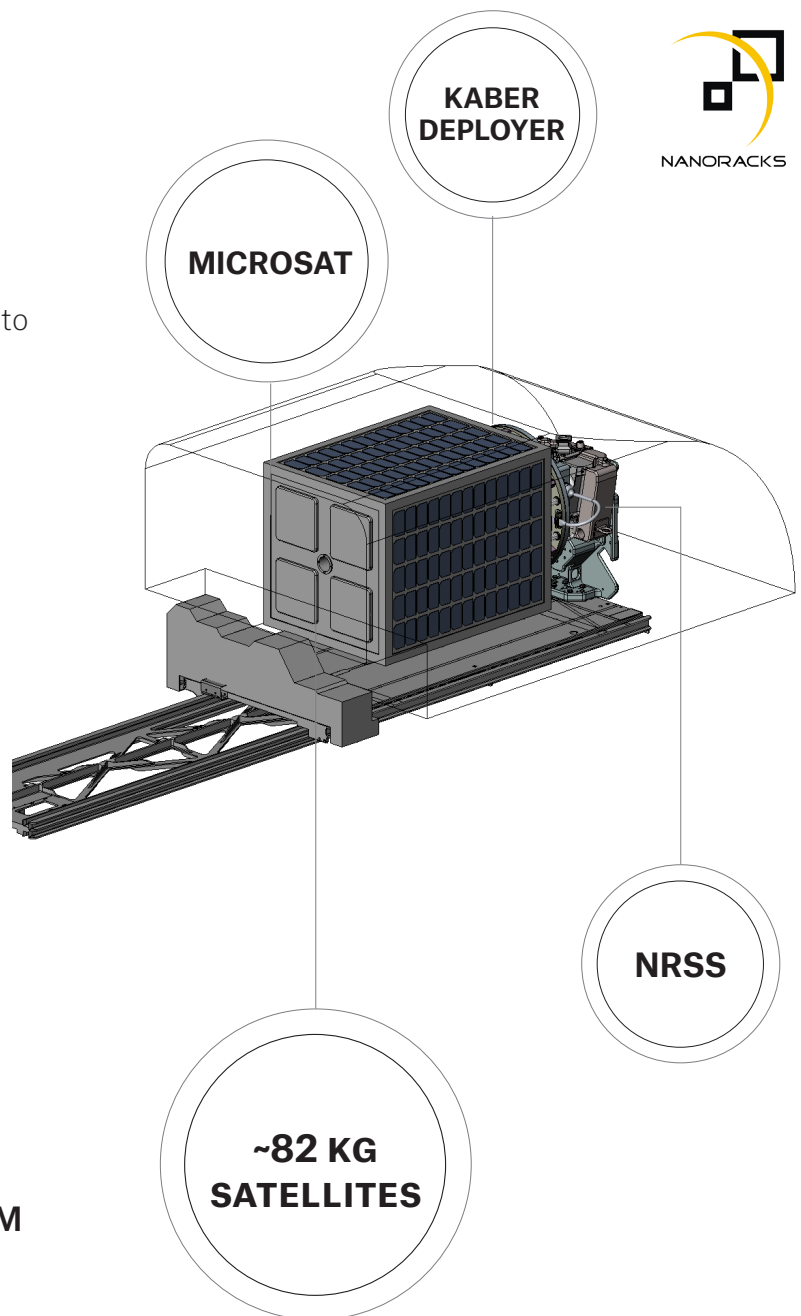


# KABER

NANORACKS DEVELOPED KABER in order to meet growing customer demand for deploying microsatellites in low-Earth orbit.

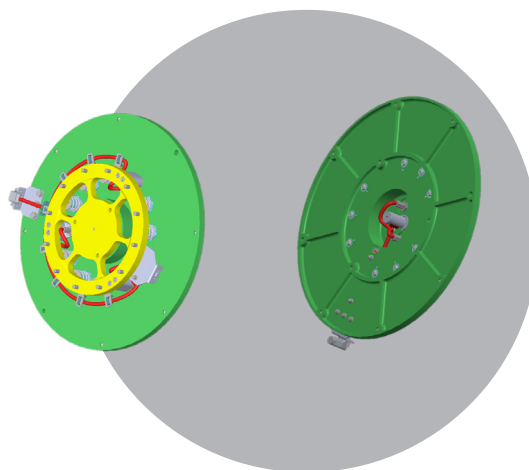
**MISSION-1 LAUNCHED ON  
ORBITAL-ATK CRS-4 (OA-4)**

**MISSION-2 SCHEDULED TO LAUNCH  
ON ORBITAL-ATK CRS-7 (OA-7)**



- Launched via pressurized launch vehicle to the International Space Station
- **Payload envelope easily accommodates 24U form factor**
- Satellites certified for ISS safety separately
- **Fully assembled Kaber is mounted & deployed outside of the ISS via the JEM Airlock Slide Table**

NRSS "fly-away" portion, remains attached to satellite (8" diameter bolt hole pattern model shown). Designed and built by NanoRacks.

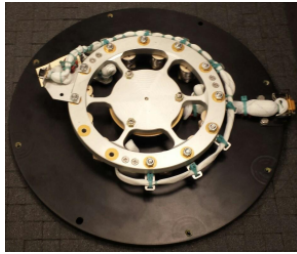
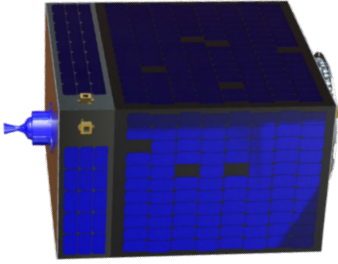


NRSS vestigial "stay behind" portion, remains attached to Kaber (standard outer flange diameter for all models)

- 1** INTEGRATED AT CUSTOMER SITE OR NANORACKS FACILITY
- 2** DELIVERY TO NANORACKS
- 3** NANORACKS & NASA CLOSE OUT
- 4** DELIVERY TO NASA JSC CMC FACILITY
- 5** HARDWARE PROCESSED & PREP FOR LAUNCH

# K A B E R

## NANORACKS MICROSAT-NRSS CARGO STOWAGE OVERVIEW



**ON SITE** at customer or NanoRacks Facility,  
microsat flight integration to NRSS

**BUBBLE WRAP** and hard foam packaging



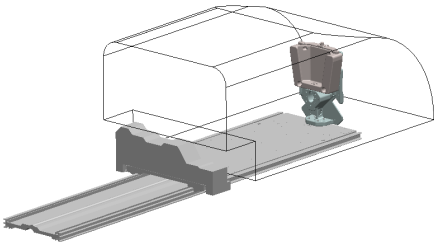
**CREW TRANSFER BAG (CTB)**



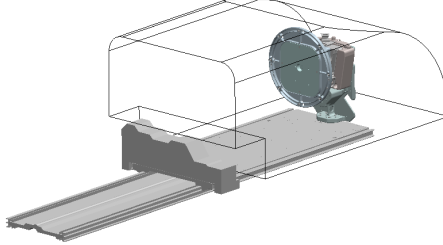
**SOFT STOWAGE** processing for ISS  
visiting vehicles

# K A B E R

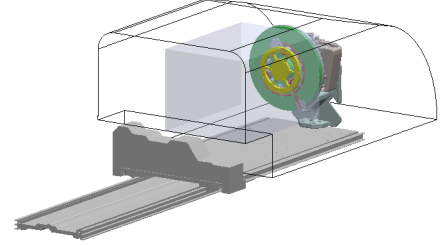
NANORACKS ISS ON-ORBIT OPERATIONS



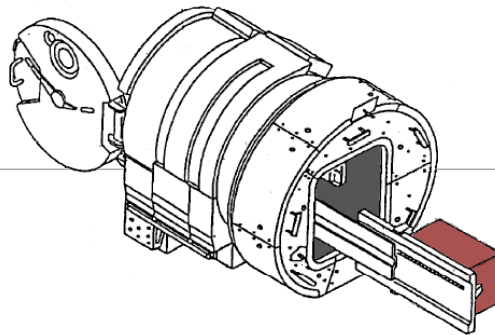
**INSTALL JCAP** to JEM A/L  
slide table



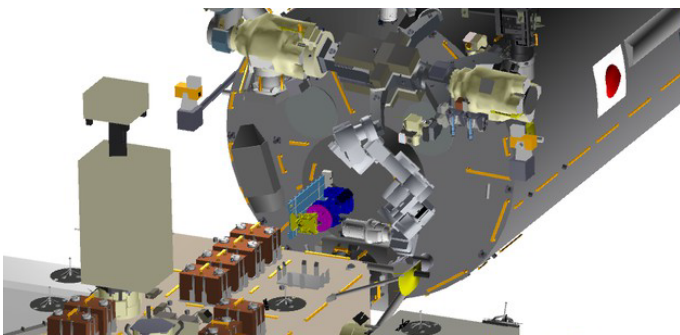
**MATE Kaber** to JCAP



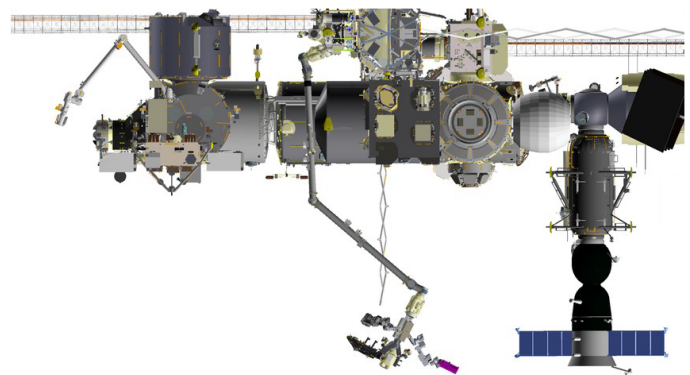
**MATE Microsat and NRSS**  
combo to Kaber



**JEM A/L** depressurization operations. Microsat-Kaber combo  
EVA extension for ISS SPDM robotic arm grapple.



**ISS SPDM** robotic arm grapples Kaber



**ISS SPDM** robotic arm maneuver to deploy