

# ESA CLEAN SPACE DAYS

8TH TO 11TH OCTOBER 2024



**Space Infrastructure  
Multifunctional Interfaces as Key to ISAM  
and More**

Wednesday, 9th October, 16:40

Thomas A. Schervan, CEO





Would you offer  
roadside assistance  
service here?





So what does a  
space engineer do  
when his car  
breaks down?





Yeh, right!



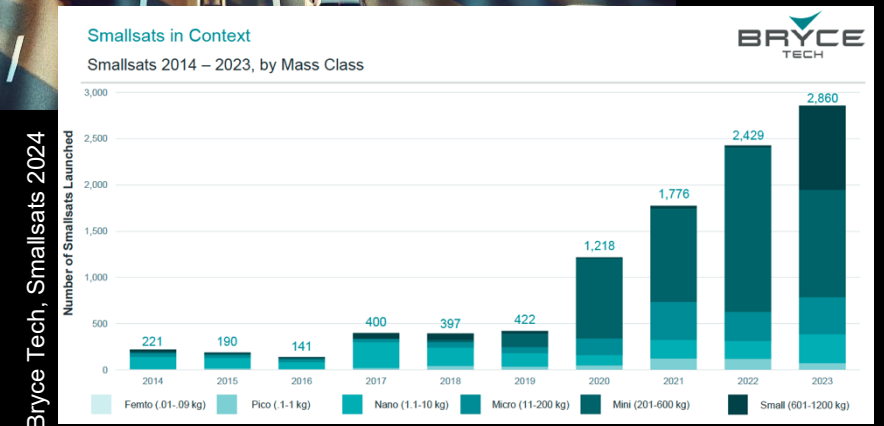
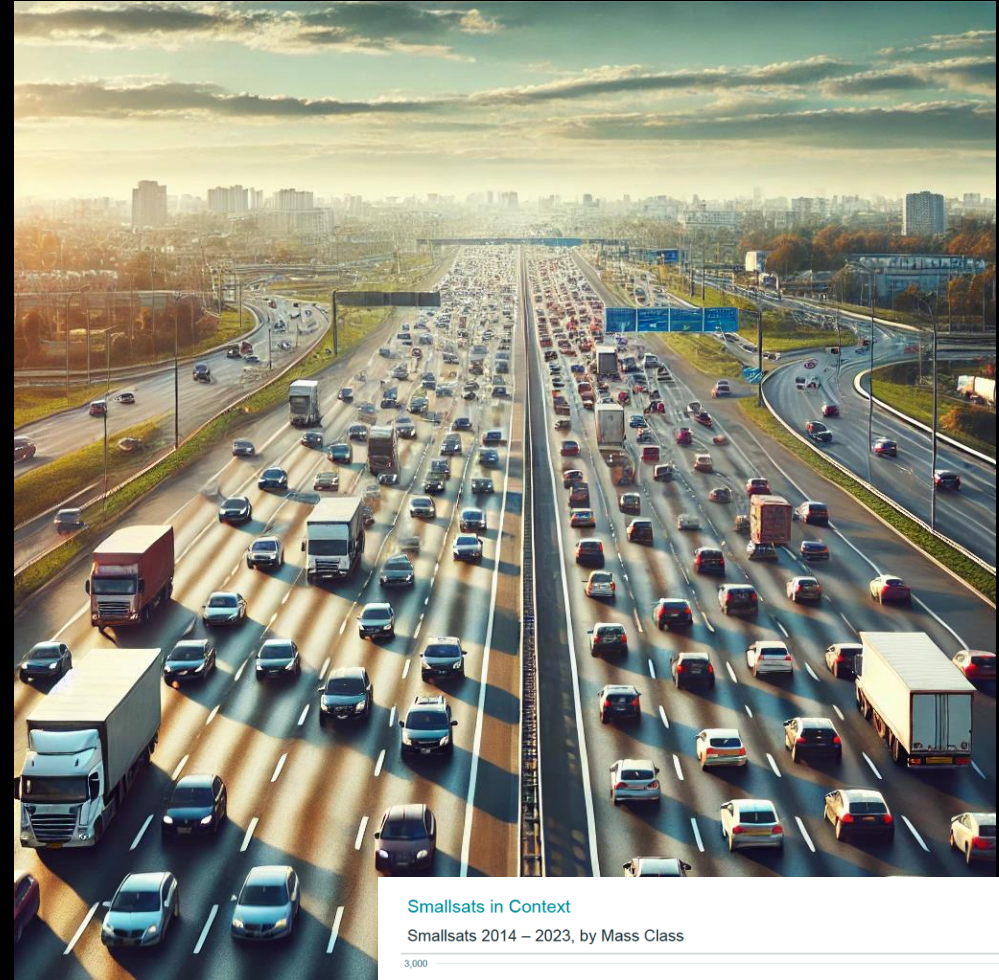
# Today's Picture has Changed...

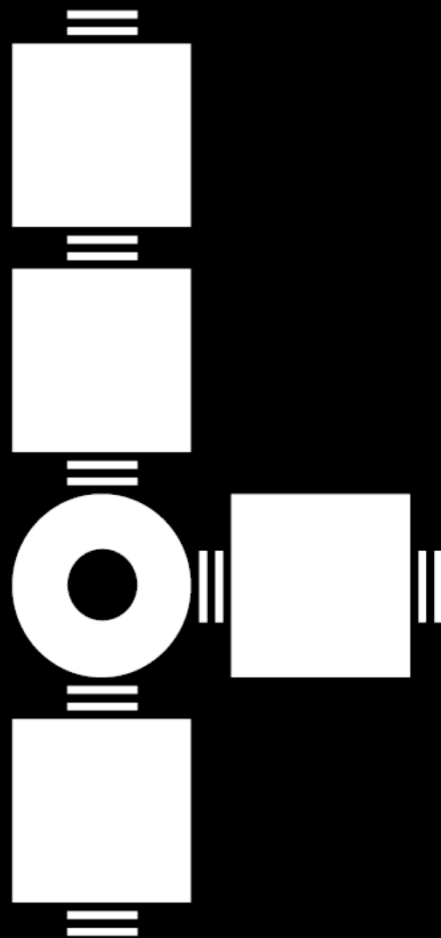
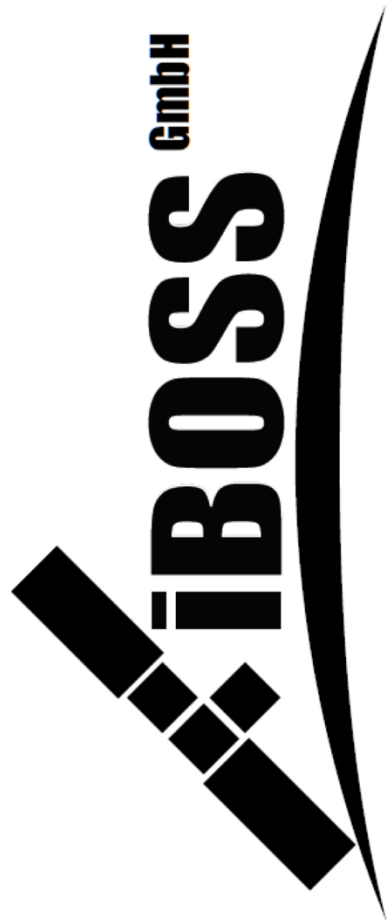
In 2024 there are more than 10,000 active satellites in space

→ 2030: 20k – 60k

Upcoming Challenge:

- Space Debris
- Pollution of Atmosphere from Launches and Deorbiting





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**52068 Aachen**  
**Germany**

**[www.iBOSS.space](http://www.iBOSS.space)**



# Our Vision



**Verification  
(Platform or Satellite)**

**Servicing  
(OOS)**

**Debris Removal  
(ADR)**

**Warehousing  
Logistics**

**Assembly  
(OOA)**

**Modular Satellites  
and**

**Exploration  
Infrastructure**



# OUR MISSION

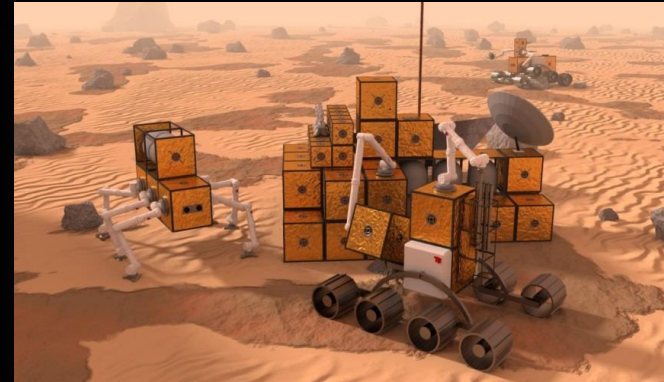
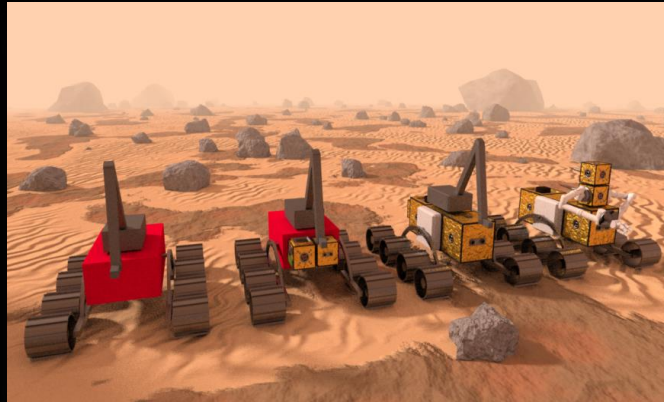
## Orbital Systems



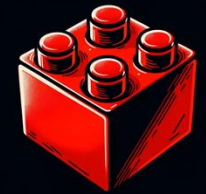
The **USB** for Space



## Planetary Systems



Enabling



in Space

**Standards ENABLING YOUR Business**



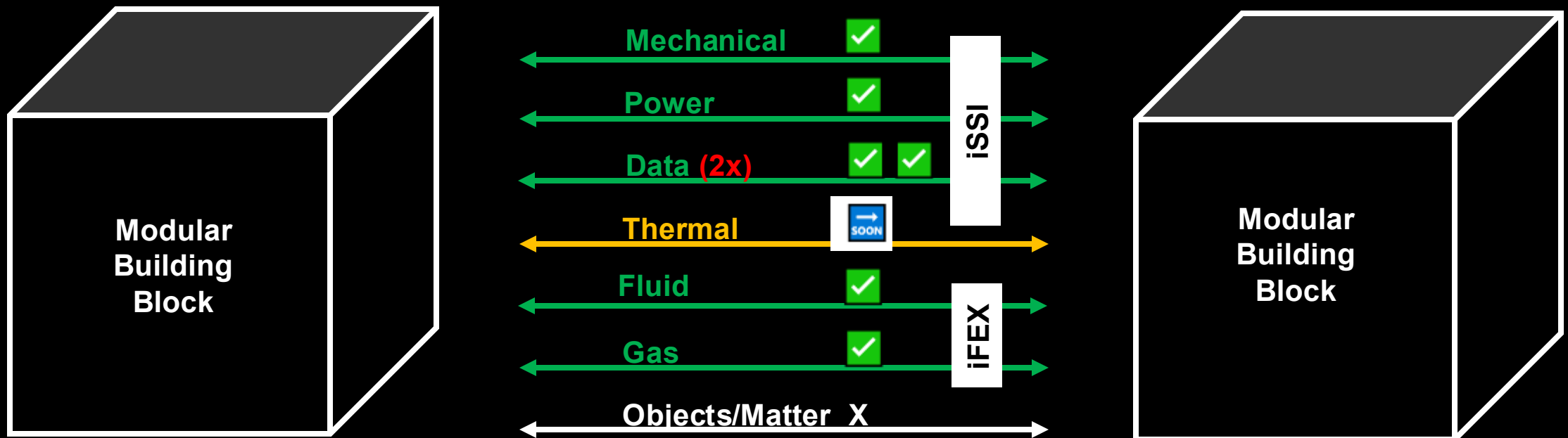
- 
- 2017 - iBOSS GmbH (Established)**
- 2018 - First Commercial Revenues + Since**
- 2019 - First International Partnerhips**
- 2020 - US Patents Granted (EU + Globally)**
- 2021 - European Innovation in Space Award**
- 2022 - In-Orbit Demonstration Mission (ISS)**
- 2023 - Q Station 2024 SpaceTech Cohort Member (USSF)**
- 2024 - ...**
- **iBOSS.space US LLC (Established)**
  - **Unveiling of Fuel Transfer Interface**
  - **NewSpace Nexus Ingitor (USSF)**

**STORY**

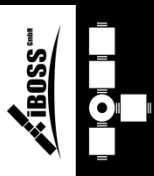


# Interfaces: Generic Scope + Modular Functionalities

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FOCUS ON ENABLING ISAM COMPONENTS

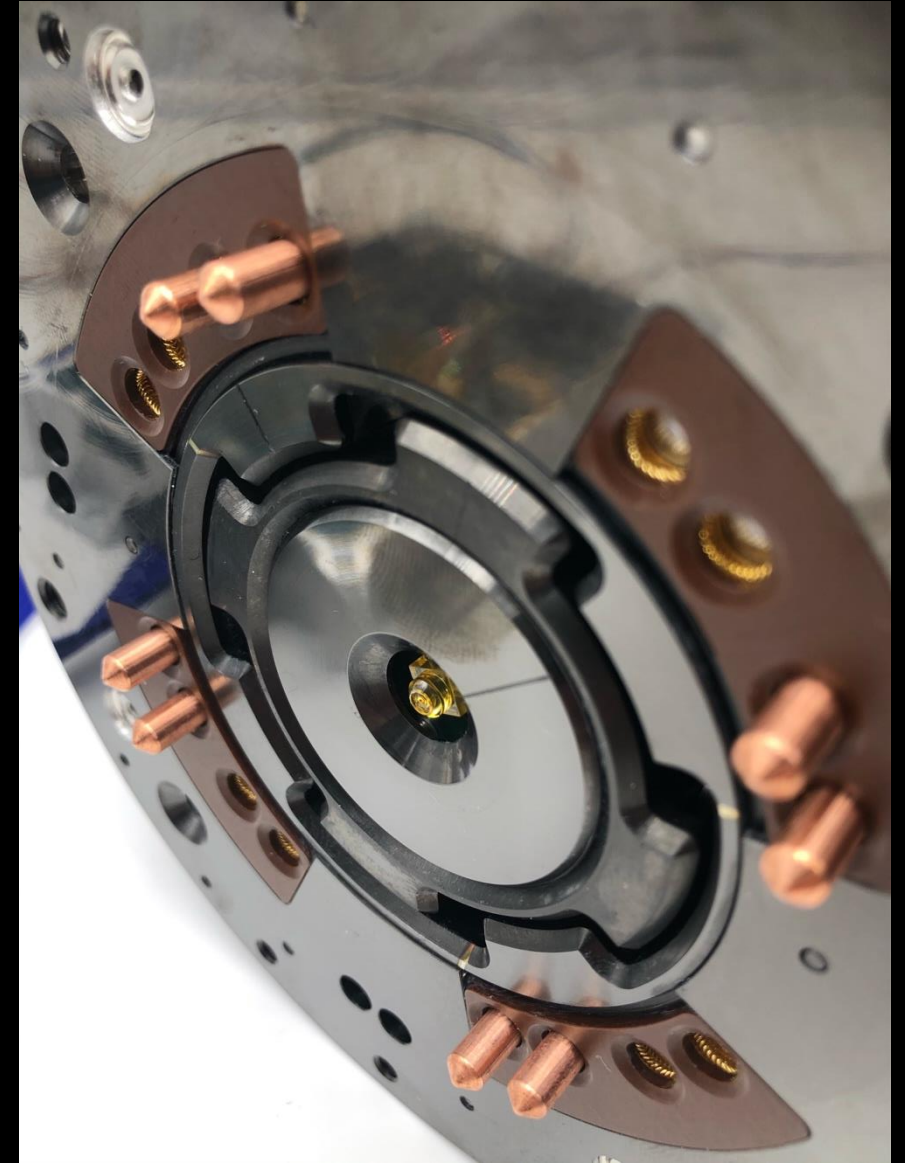




# CONNECT + TRANSFER

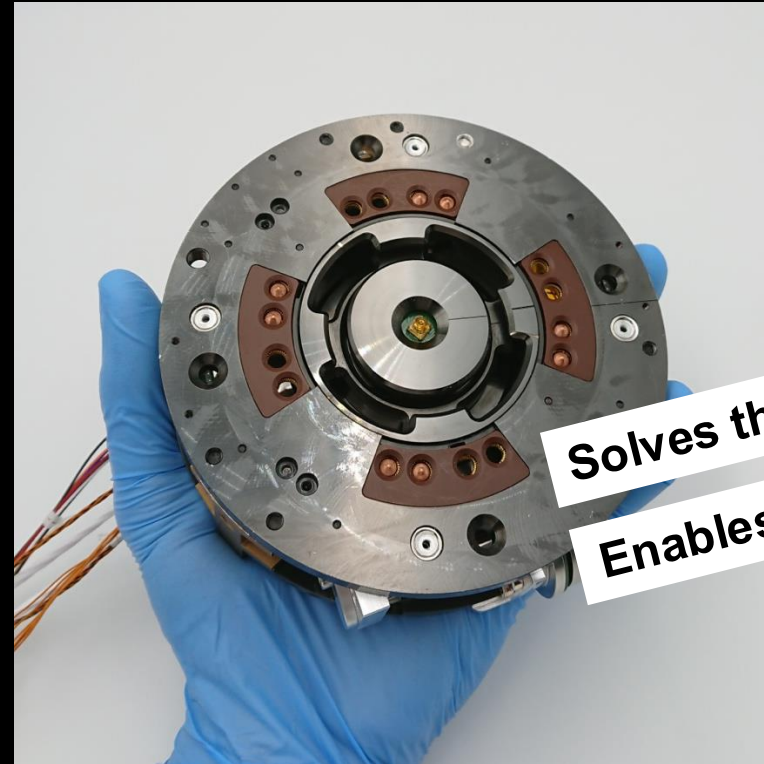


**ANDROGYNOUS SOLUTIONS**



# iSSI® - intelligent Space System Interface

- **Multi-Functional** (Mechanical, Data, Power)
- **Add-On-Modules** (Formfit, Thermal, Dust Cover, Ranging)
- **BDRRM** (Bi-Directional Redundant Release Mechanism)
- **AIP** (Anti-Intrusion Posture)
- **Modular by Functionality**
- **Androgynous Design**
- **Lubricant-Free**
- **Flat Surface**
- **Patented**
- **Tested in Space**



Saves Time

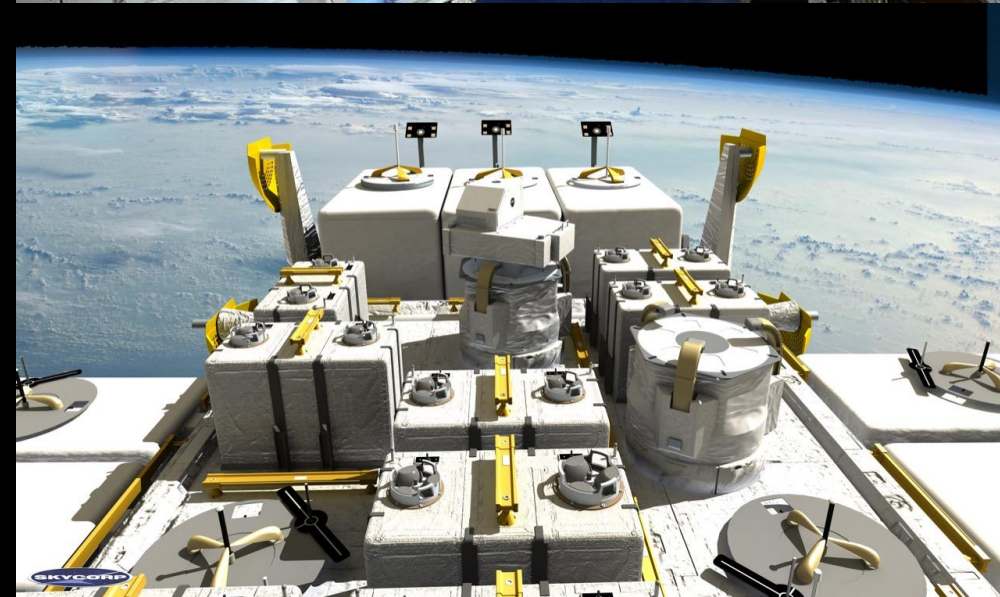
Saves Cost

Solves the Integration Problem

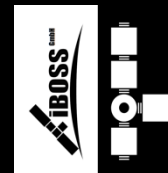
Enables Modular Architecture





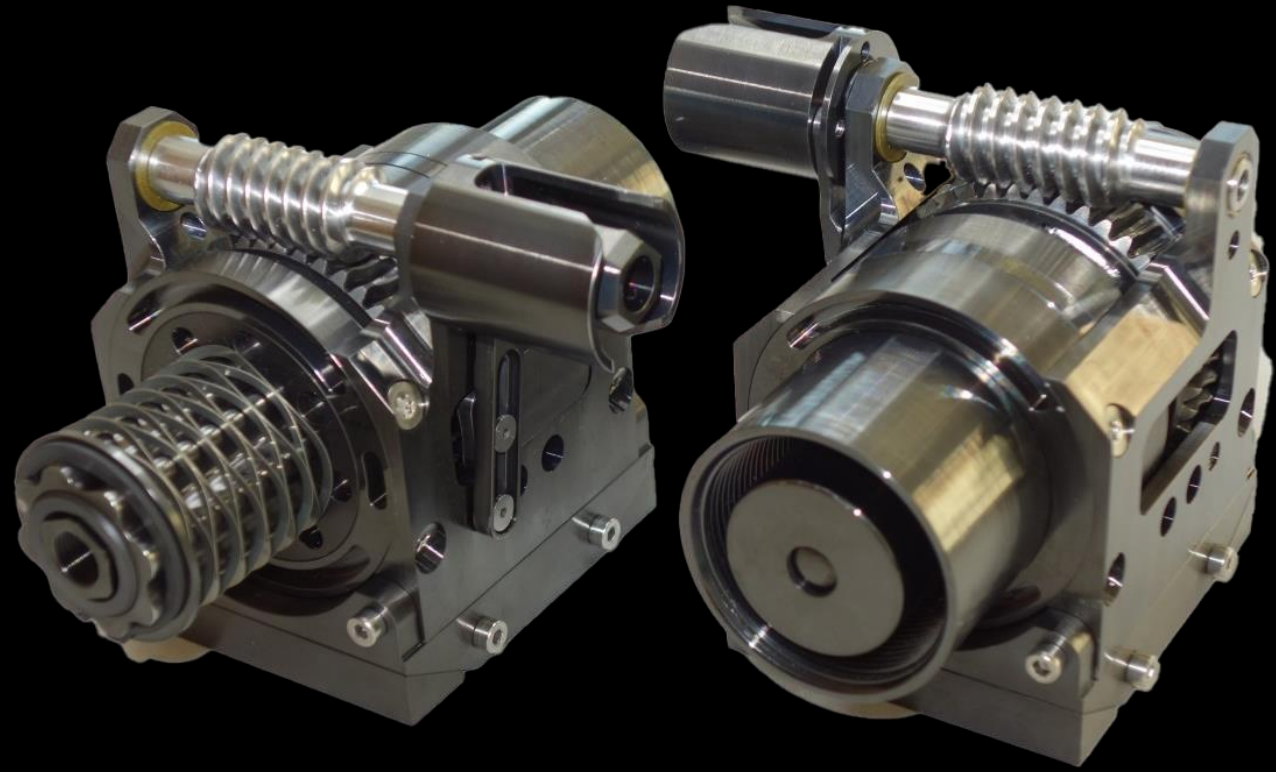


2022 IN-ORBIT DEMONSTRATION – TRL7

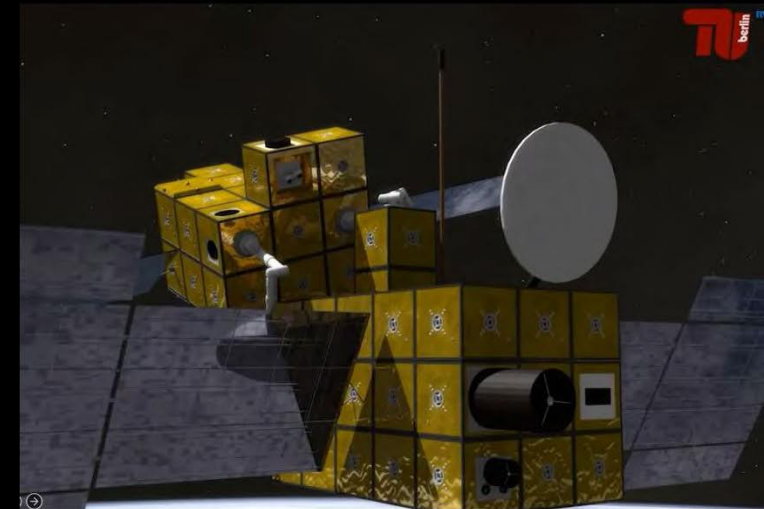
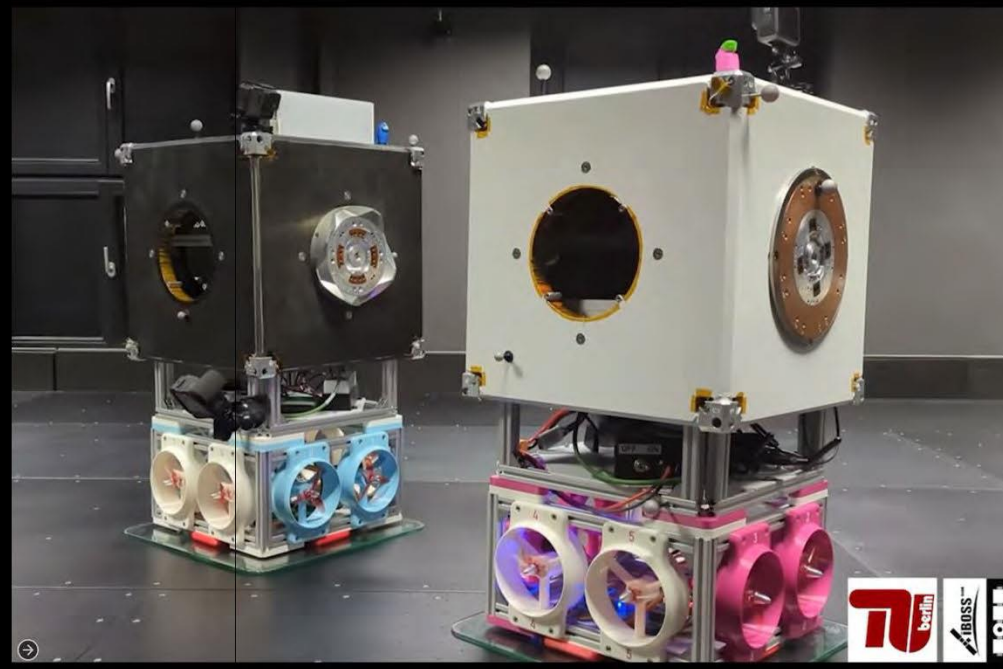
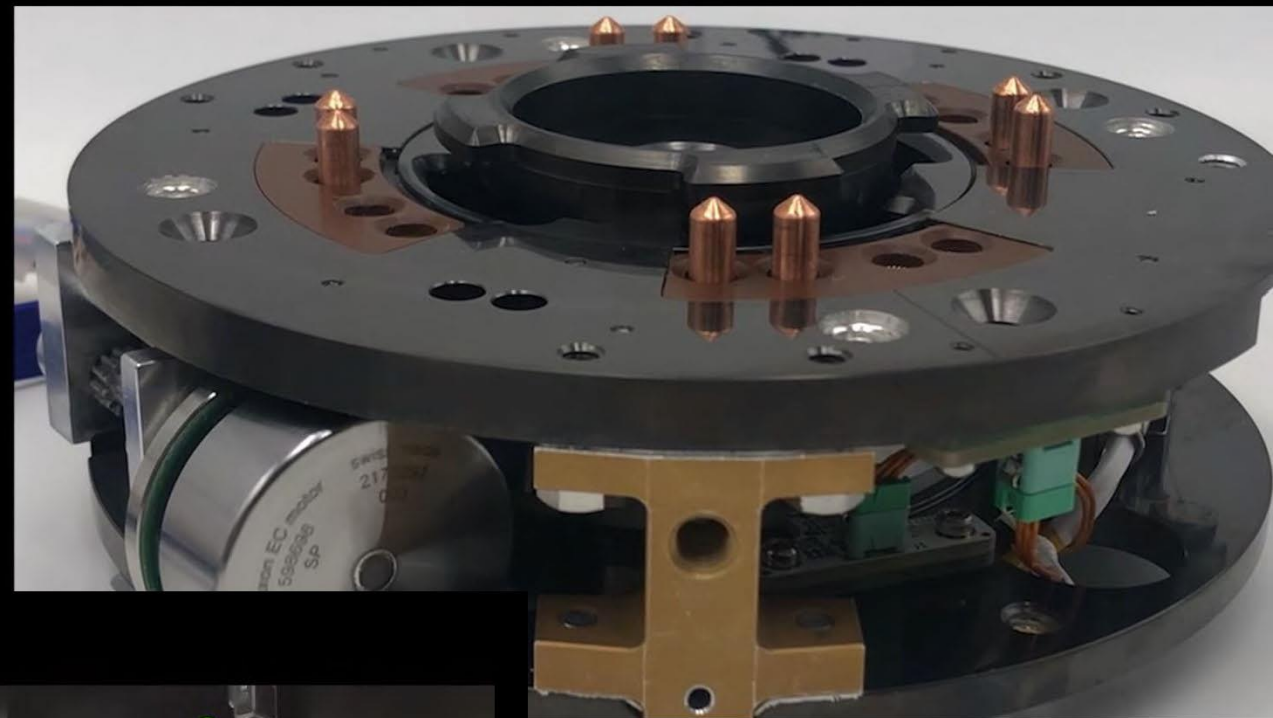
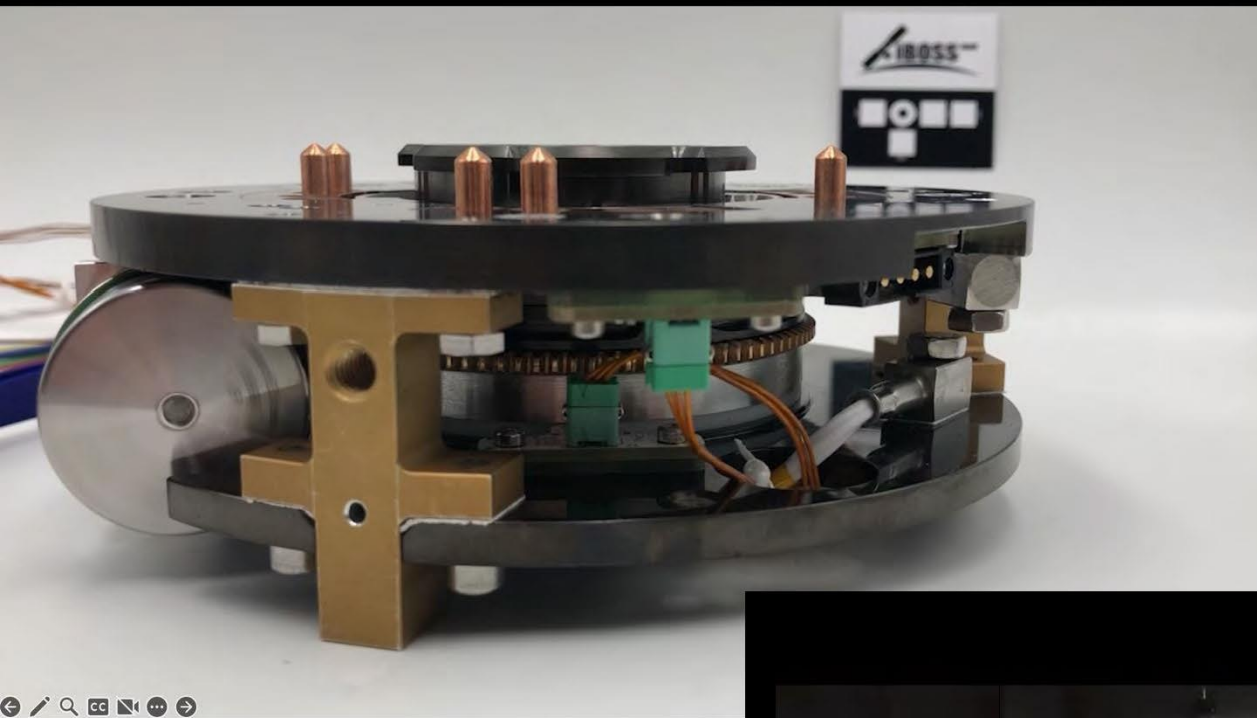


# iFEX - intelligent Fuel EXchanger

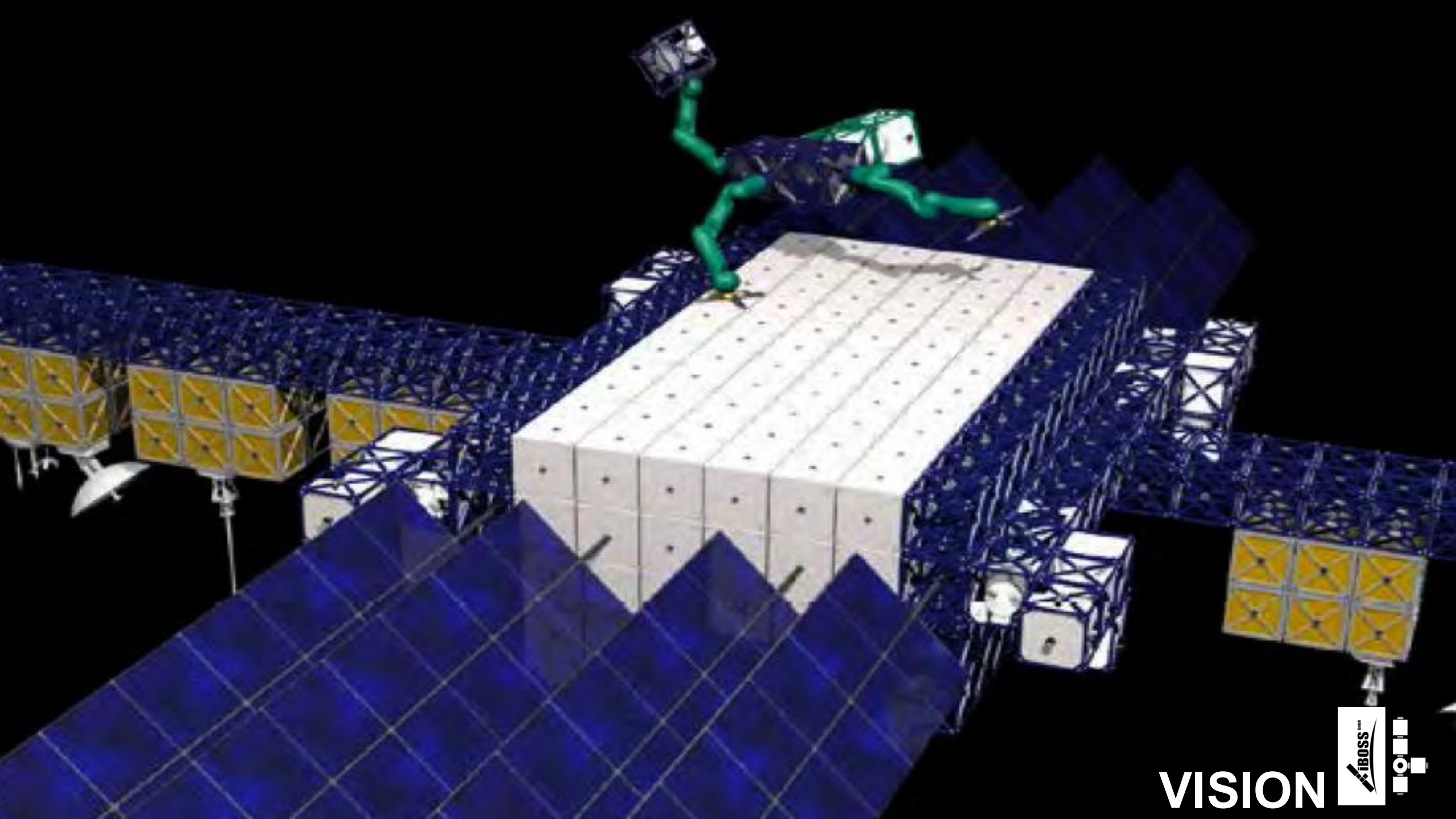
- Multi-Propellant Transfer (Liquid + Cryogenic)
- Unparalleled Features
- Androgynous Design
- Flat Surface
- Compact
- Patented
- TRL 4-5



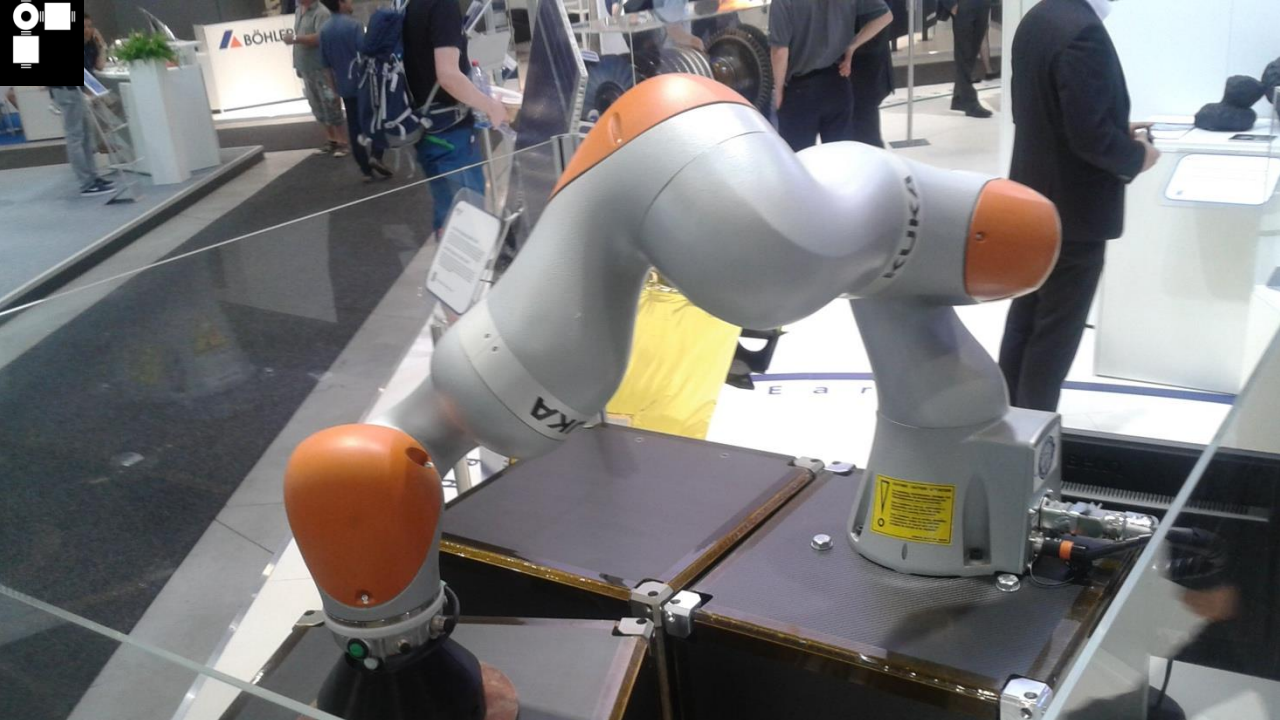
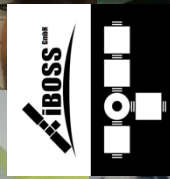
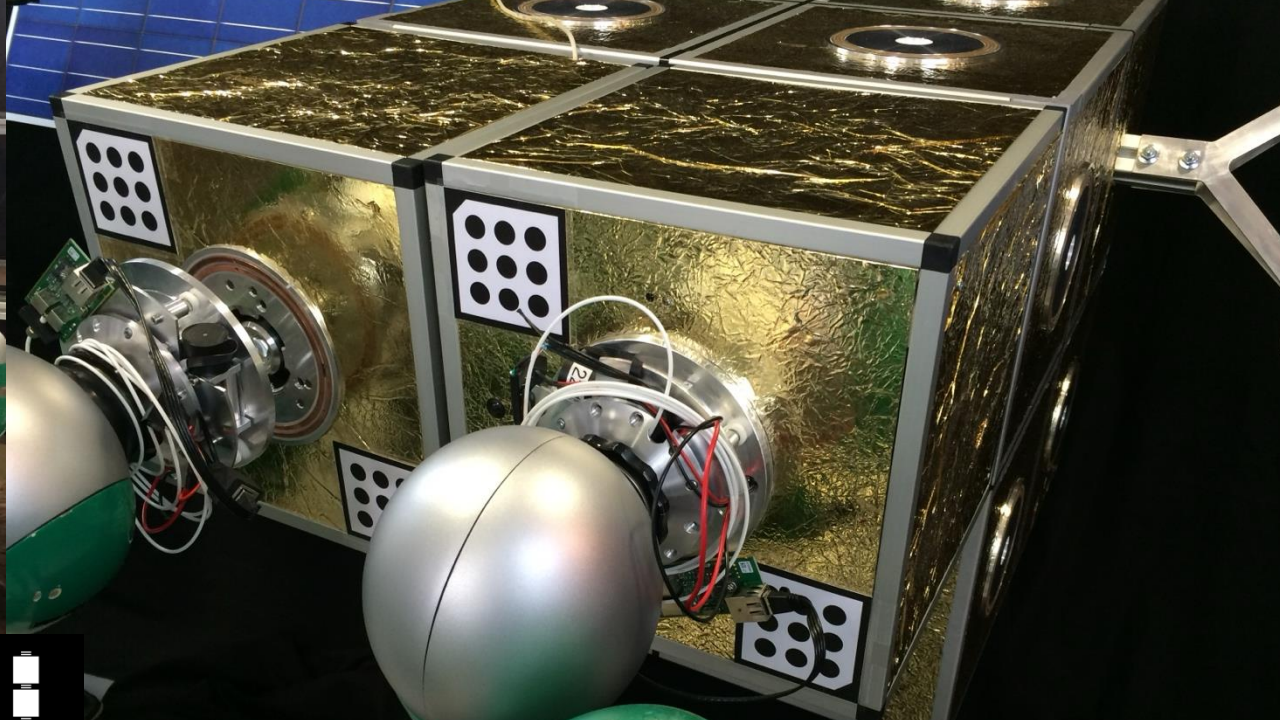
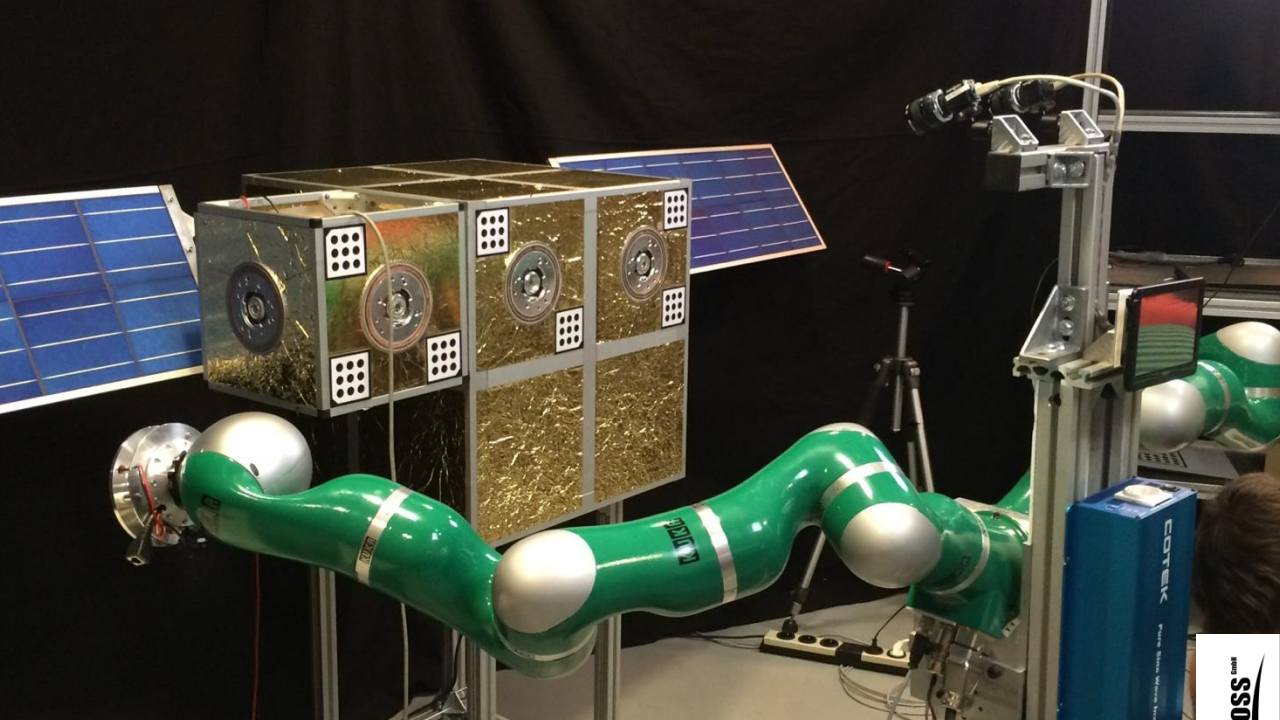






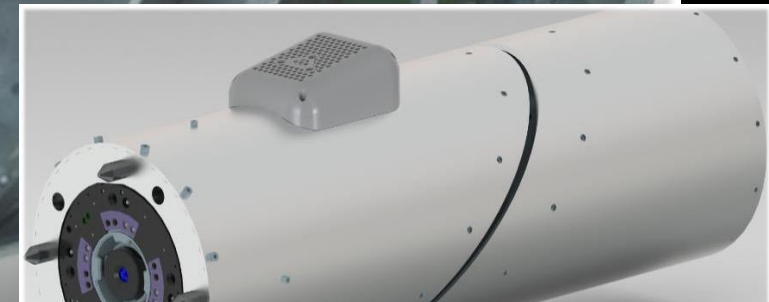
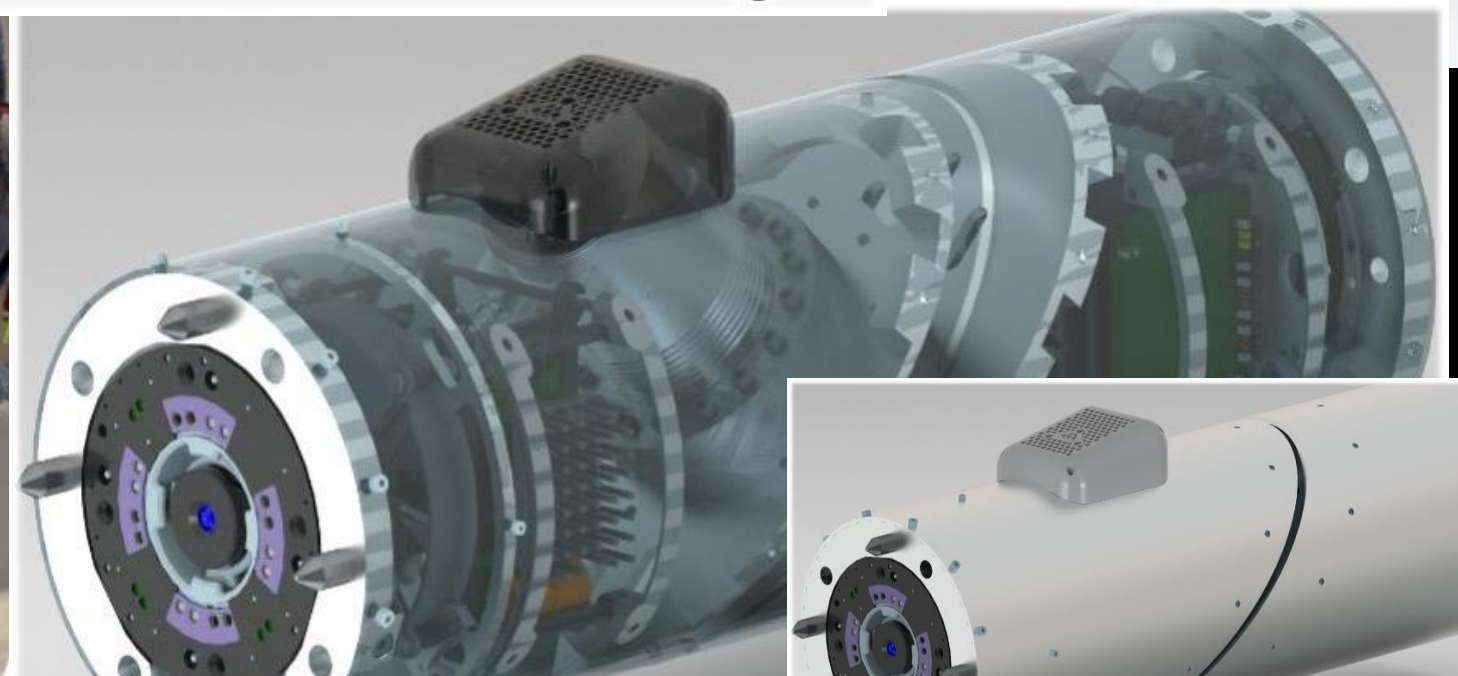
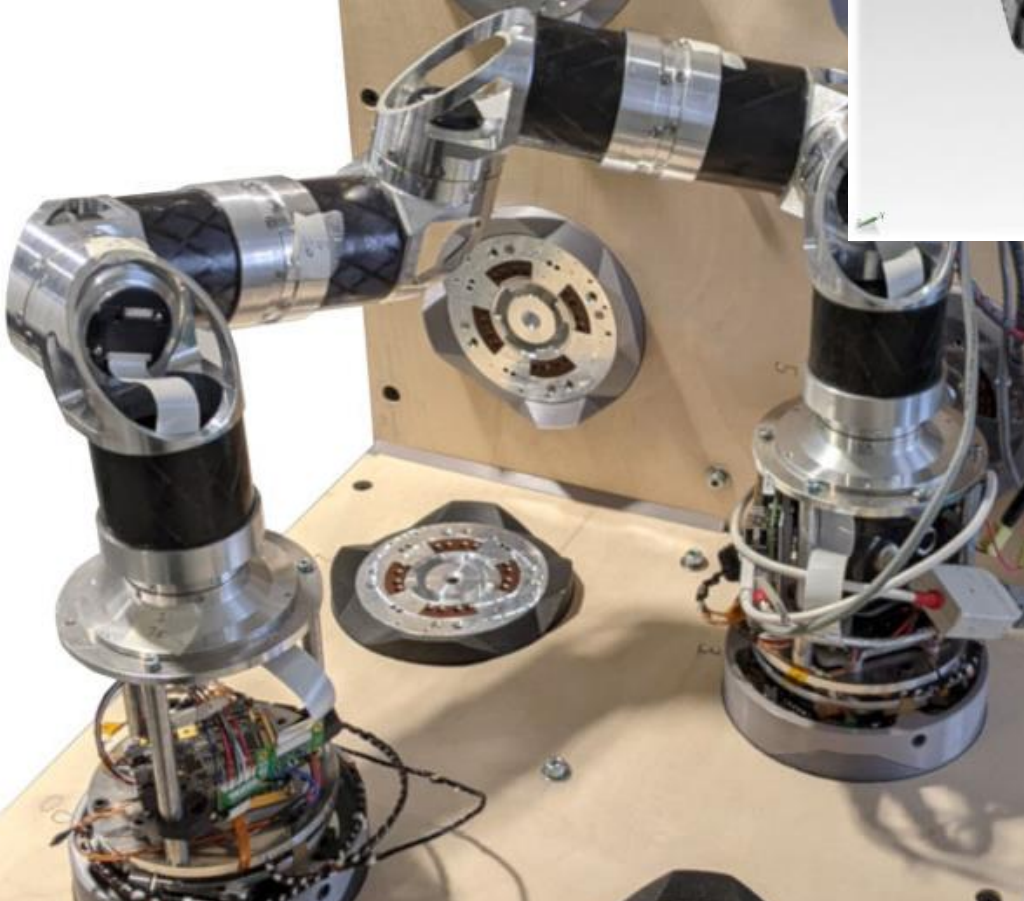
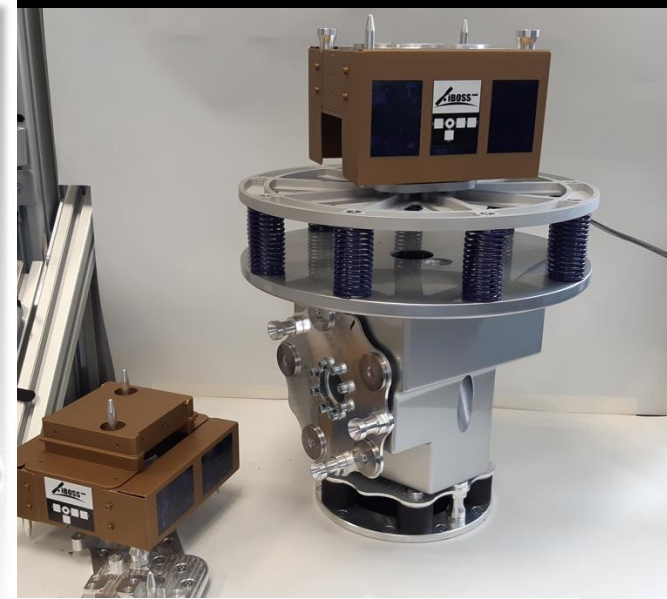
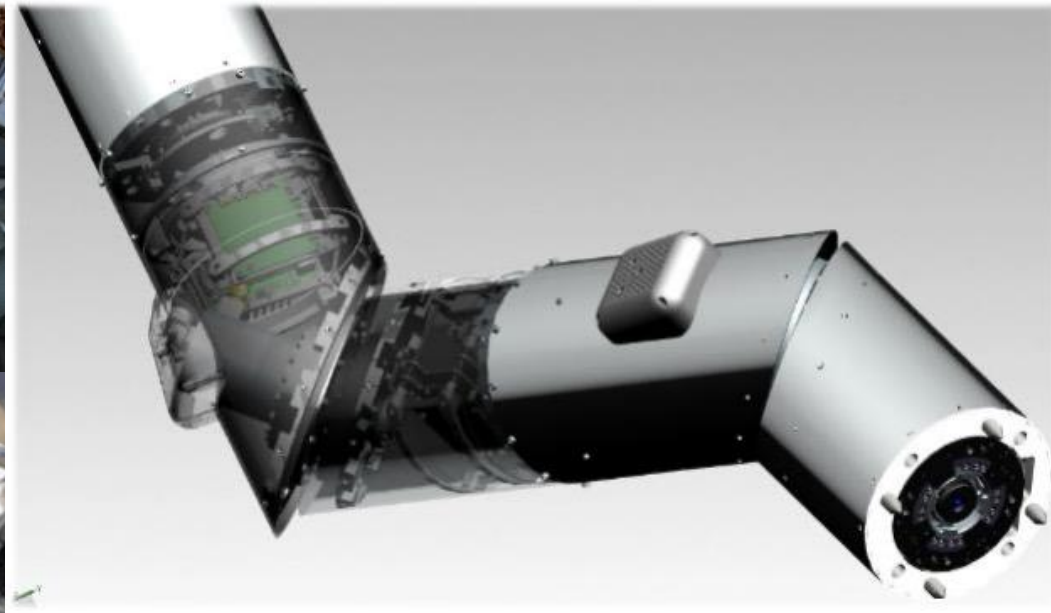
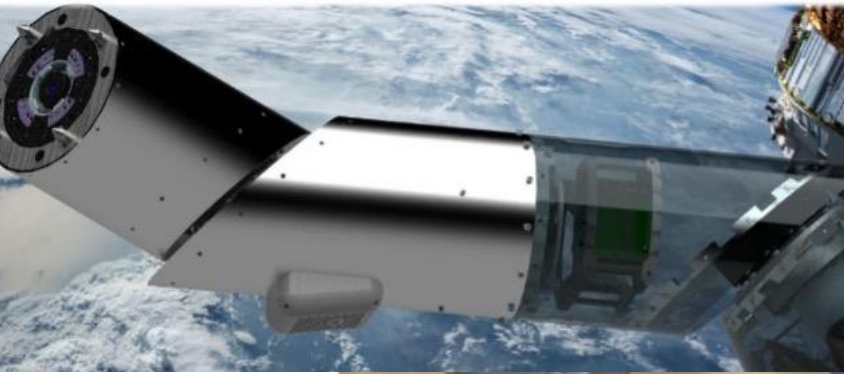








# iSSI® Enhancing Robotics







**SUSTAINING MEMBER + PRESIDENCY**

# Applications

## The Port by Arkisys

- Service Platform
- OOS
- Robotic Manipulator
- iSSI is Basedlined

→ IAC 2024: Hardware and Demo

## Future Modular S/C and Space Stations by

- SpaceBuilt
- Orbital Reef
- Starlab
- Axiom Stations
- Gateway - Artemis Program

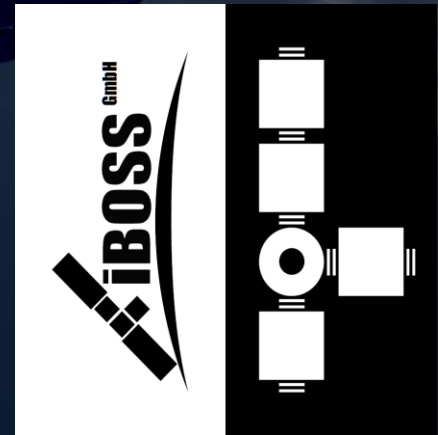




**It has been a pleasure to present to you!**



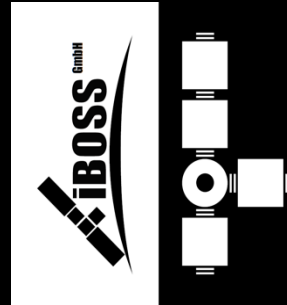
**HEADING FOR STANDARDS!**



**It was a pleasure.**



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**Joerg Kreisel**  
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