



## IN-SPACE SERVICING, ASSEMBLY, AND MANUFACTURING (ISAM) SOLUTIONS



In-space servicing missions autonomously repair, refuel, or upgrade spacecraft to maximize their useful life. Moog is collaborating with customers to plan ISAM missions. Our existing innovative technologies offer solutions for a wide range of spacecraft and missions and we are committed to investing in the development of novel solutions for the ISAM market.

Moog has designed and manufactured components and systems for satellites and launch vehicles for more than 60 years. At the core of our products are redundancies and unique technologies that eliminate risk and improve operational life of robotic systems. The reliability of our hardware and software solutions ensures minimal contamination risk to spacecraft.

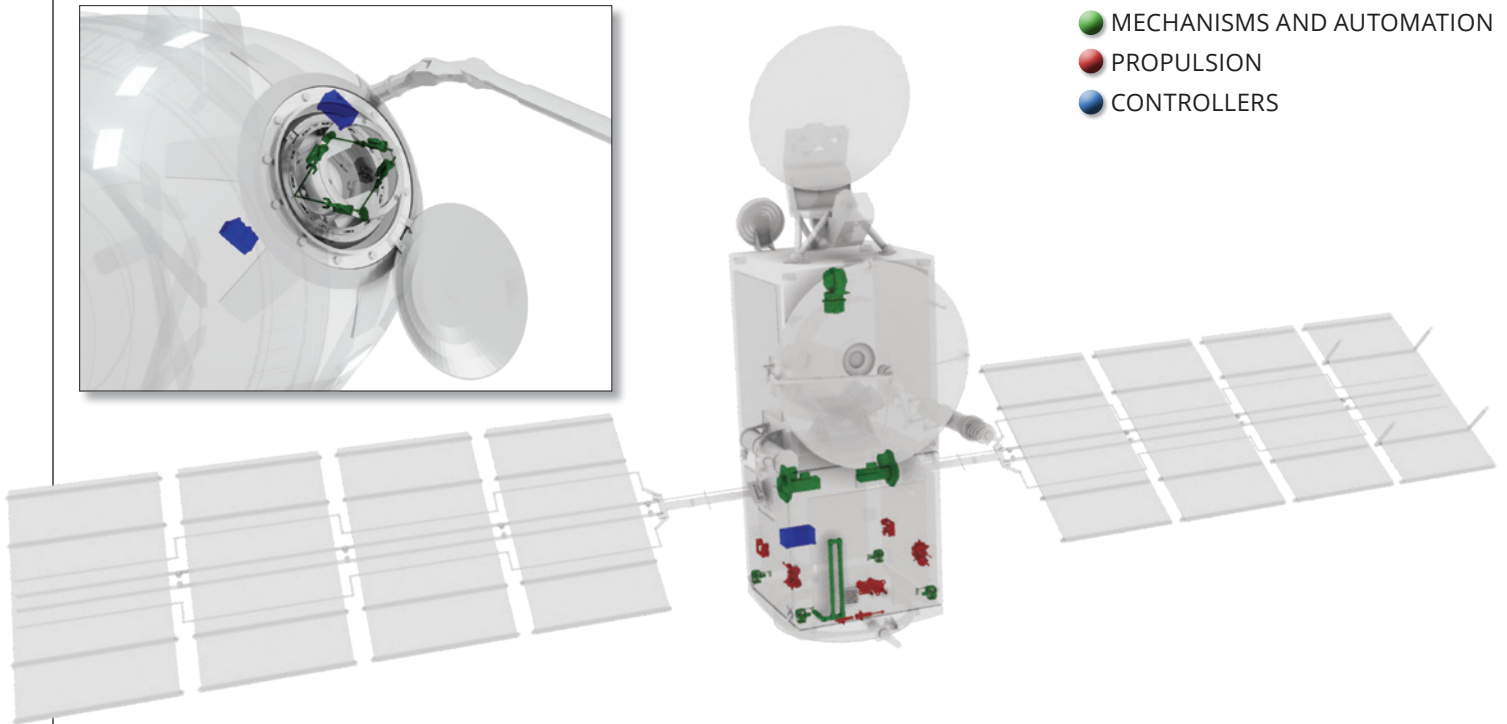
Moog is developing internally as well as in collaboration: in-space robotic systems, rendezvous and proximity operations (RPO), manufacturing, debris remediation, and space domain awareness solutions.

Moog is investing today in developing future ISAM solutions that are affordable, scalable, and accessible to our customers.

### KEY PRODUCTS FOR ISAM

- ESPA
- Avionics
- Propulsion
- Mechanisms
- SoftRide Isolation
- Docking Actuators
- Pointing Actuators
- Fuel and Fluid Transfer Coupling (FTC)
- Orbital Maneuvering Vehicles
- Robotic Arm Motor Controllers

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- MECHANISMS AND AUTOMATION
- PROPULSION
- CONTROLLERS

## DOCKING MECHANISMS

Moog Linear Actuator System (LAS) is a major sub-system within the NASA Docking System (NDS). It provides multi-axis independent electromechanical load control for docking to ISS and eventually Gateway. Half ESPA docking system with and without umbilical (electrical & fluids) investment is ongoing.

## FLUID TRANSFER

Moog Fluid transfer coupling (FTC) provides cryo and non-cryo fluid transfer between two space vehicles. FTC will be integral for orbit sustainment for Gateway.

## ROBOTIC CONTROLLERS

The Rikishi Electronics Unit (REU) is a robotic arm controller able to drive up to nine separate servo motors (joints), such as robotic arms or articulated structures. REUs will support RSGS missions.



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