

Woman-Owned | Economically Disadvantaged Woman-Owned | Veteran-Owned | Service-Disabled Veteran-Owned | Small Disadvantaged Business | Hispanic Minority-Owned Small Business



Bringing Space Down to Earth®





# The Craig Technologies Commercial Difference

*Craig Technologies* is a nationwide engineering, technology and manufacturing firm providing services to both government and commercial customers including Design/Development, Systems Engineering, Multidisciplinary Engineering, Training and Courseware Development, Modeling & Simulation, IT Support, Integrated Logistics Support, Satellite Payload Integration and Operations support, Wire/Fiber Cable Harness and Electronics Assembly, and Precision Machining, Fabrication and Assembly.

- Founded in 1999
- Headquartered in Merritt Island, FL
- Manufacturing Facility in Cape Canaveral, FL
- Associates present in 21 states
- ISO 9001 2015 and AS9100D Certified
- Compliant with NISPOM Guidelines
- ITAR Compliant



Carol Craig, Founder and CEO

Woman-Owned · Economically Disadvantaged Woman-Owned · Veteran-Owned · Service-Disabled Veteran-Owned · Small Disadvantaged Business · Minority Hispanic-Owned · Small Business

Our core company values of *Family • Integrity • Loyalty • Passion • Community*<sup>®</sup> ensure that every *Craig Technologies* employee will deliver quality and value in our products and services while actively listening to customer needs.

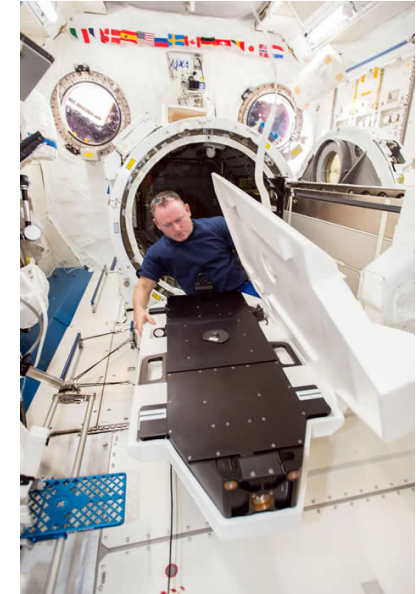
# ISS National Laboratory (Center for the Advancement of Science in Space)

- ISSNL Implementation Partner
- Commercial Service Provider (CSP)
- Umbrella Agreement



# Craig Technologies Commercial Space

- ❖ International Space Station Support Provider
  - Satellite Deployer
  - External Testing Platform
- ❖ On-Orbit Satellite Test Platform
  - Full Stack Process from Handoff to Monitoring
  - International Telecommunication Union Spectrum Filing
- ❖ Flight Hardware Manufacturing

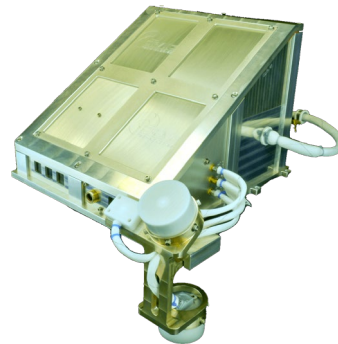


Launch



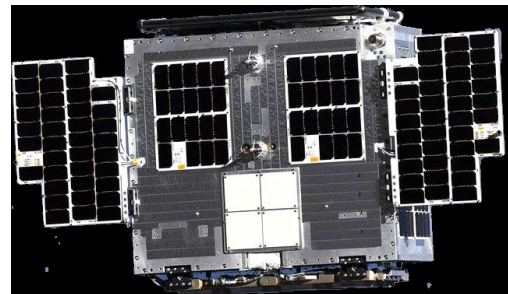
SpaceX

Test (TRL)



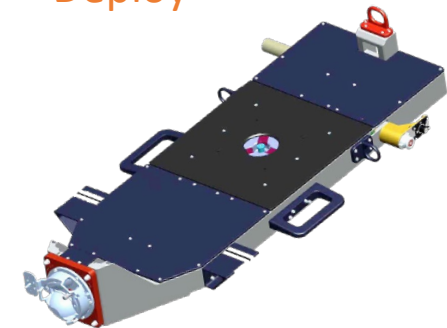
CraigX

Develop



LizzieSat

Deploy





# Proven Experience Providing Products and Services to the LEO Space Industry



- Print head for regolith-polymer mixture and associated feedstock - [US20200122392A1](#)
- Heat transfer system for regolith - [US10876797B2](#)
- Method for establishing a wastewater bioreactor environment - [US20190308895A1](#)
- Vertical takeoff and landing pad and interlocking pavers to construct same - [US20190309485A1](#)
- High-load vacuum chamber motion feedthrough systems and methods - [US20190308152A1](#)



# Craig-X Flight Test Platform (FTP)

## CRAIG-X FEATURES

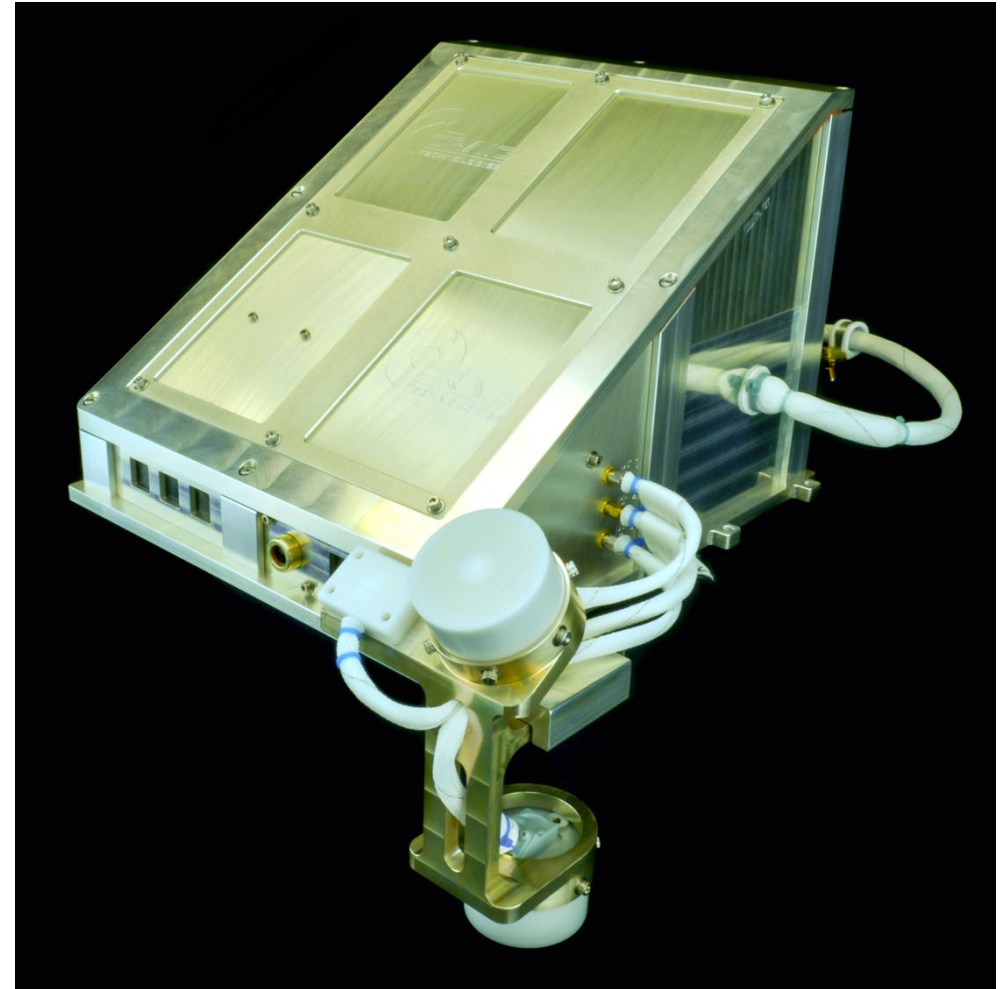
- Highly reconfigurable platform
- Available Space: 1100 in<sup>3</sup> (Payloads are NOT required to conform to CubeSat form factors)
- Power: 28V connectors (up to 3 available)
- Flight computer available to support a wide array of sensor data
- Wake viewing available
- Additive and traditional manufacturing available to support payload development

## CRAIG-X MISSION DETAILS

- Typical deployment period: 15 weeks
- Integration and delivery to ISS included
- All payloads can be returned if desired by payload provider

## CRAIG-X POTENTIAL PAYLOADS

- Optical communication payload
- Composite fiber reinforced 3D printed parts for structural testing
- Testing environmental effects on 3D printed aluminum after exposure to space
- Satellite component level circuit board testing
- Electroplating: Metal coating over plastic using proprietary plating techniques
- Pharmaceutical testing in the zero-g environment of unpressurized space allowing for accelerated drug development at a reduced cost

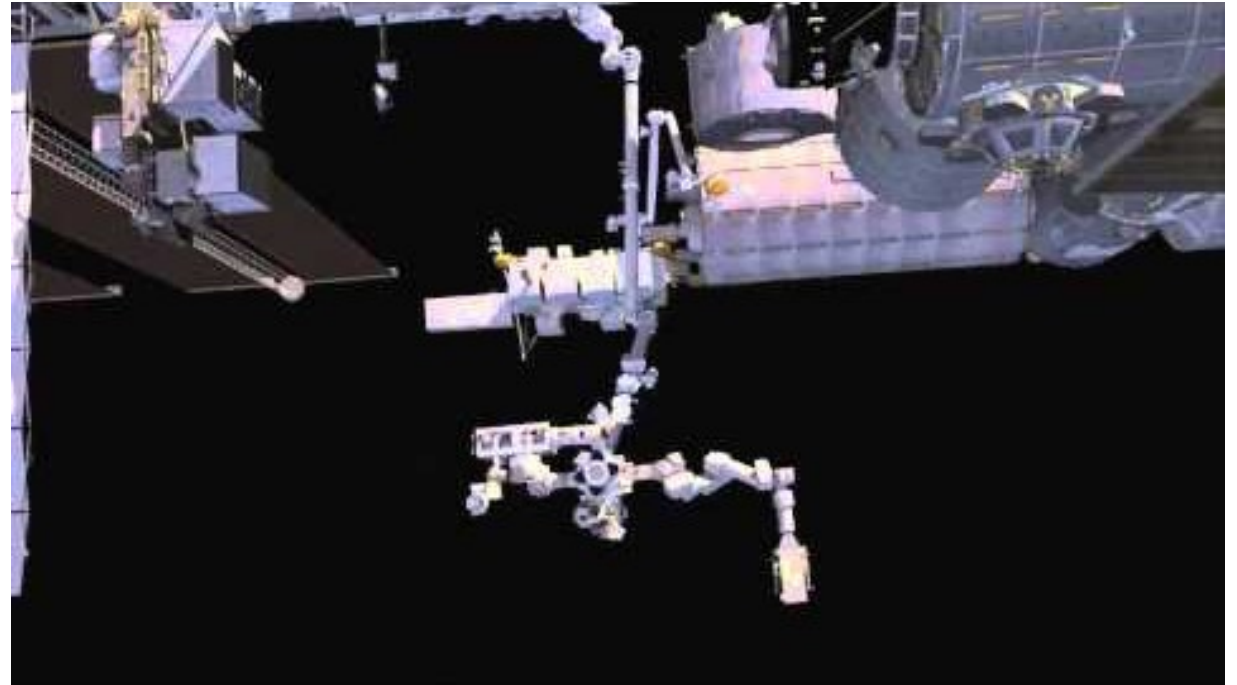




# Space Station Integrated Kinetic Launcher for Orbital Payload Systems (SSIKLOPS)

## Satellite Requirements for SSIKLOPS Deployment:

Requirement	Criteria		
Ballistic Number (BN)	116 kg/m <sup>2</sup> or less. BN = Mass / (Frontal Area * Cd), Where Cd = 2.0		
Center of Gravity (CG)	X (in) -1.00 to +1.00	Y (in) 2.00 to 14.20	Z (in) -1.00 to + 1.00
Deployment Force	Able to withstand the maximum force, 35lbf, applied from SSIKLOPS at the deployment interface during deployment.		
Mass	Meet the mass of 116kg or less (includes the mass of the experiment attachment fixture).		
Survivability	Capable of functioning after exposure to the external environment for no less than 10 hours unpowered.		
Volume	Meet the defined allowable envelope: 20 in x 20 in x 30 in		



- SSIKLOPS has deployment heritage along with a TRL 9.
- Past deployments include:
  - SpinSat – Naval Research Laboratory & Digital Solid State Propulsion
  - LoneStar – Texas A&M University & University of Texas at Austin
  - STPSat-4 – Space and Missile Systems Center’s Space Test Program





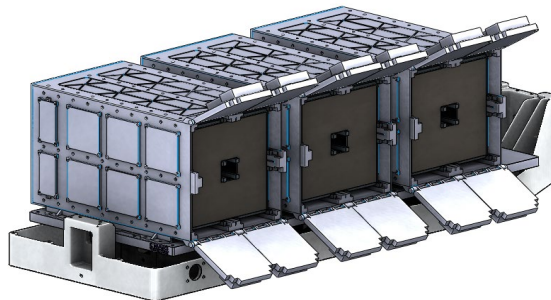


# PHOENIX DEPLOYER

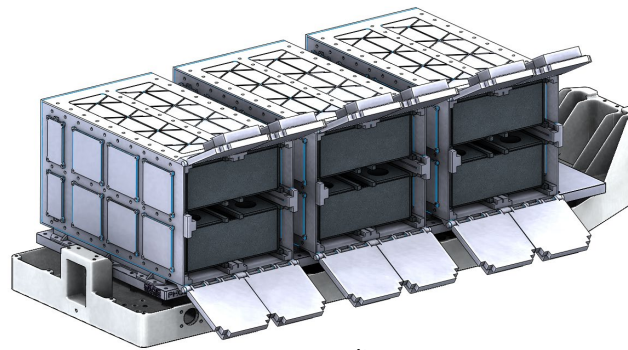
Craig Technologies offers deployment of multiple CubeSats from the International Space Station. Utilization of Craig's SSIKLOPS platform coupled with a series of three 12U CubeSat deployers provides low cost and high volume access to space.

Phoenix can accommodate satellites within the 1U-12U range, giving the ability to launch a variety of satellites in the same deployment sequence.

12U CubeSats (Up to 3)

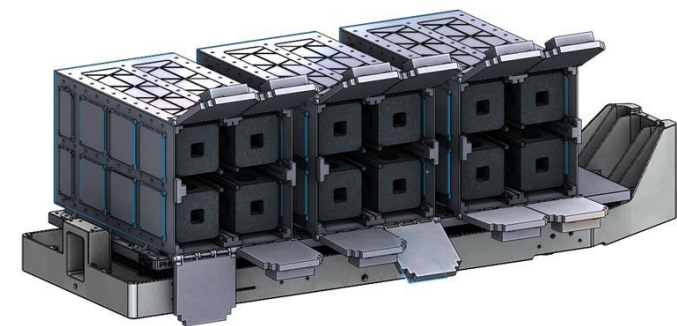


6U CubeSats (Up to 6)



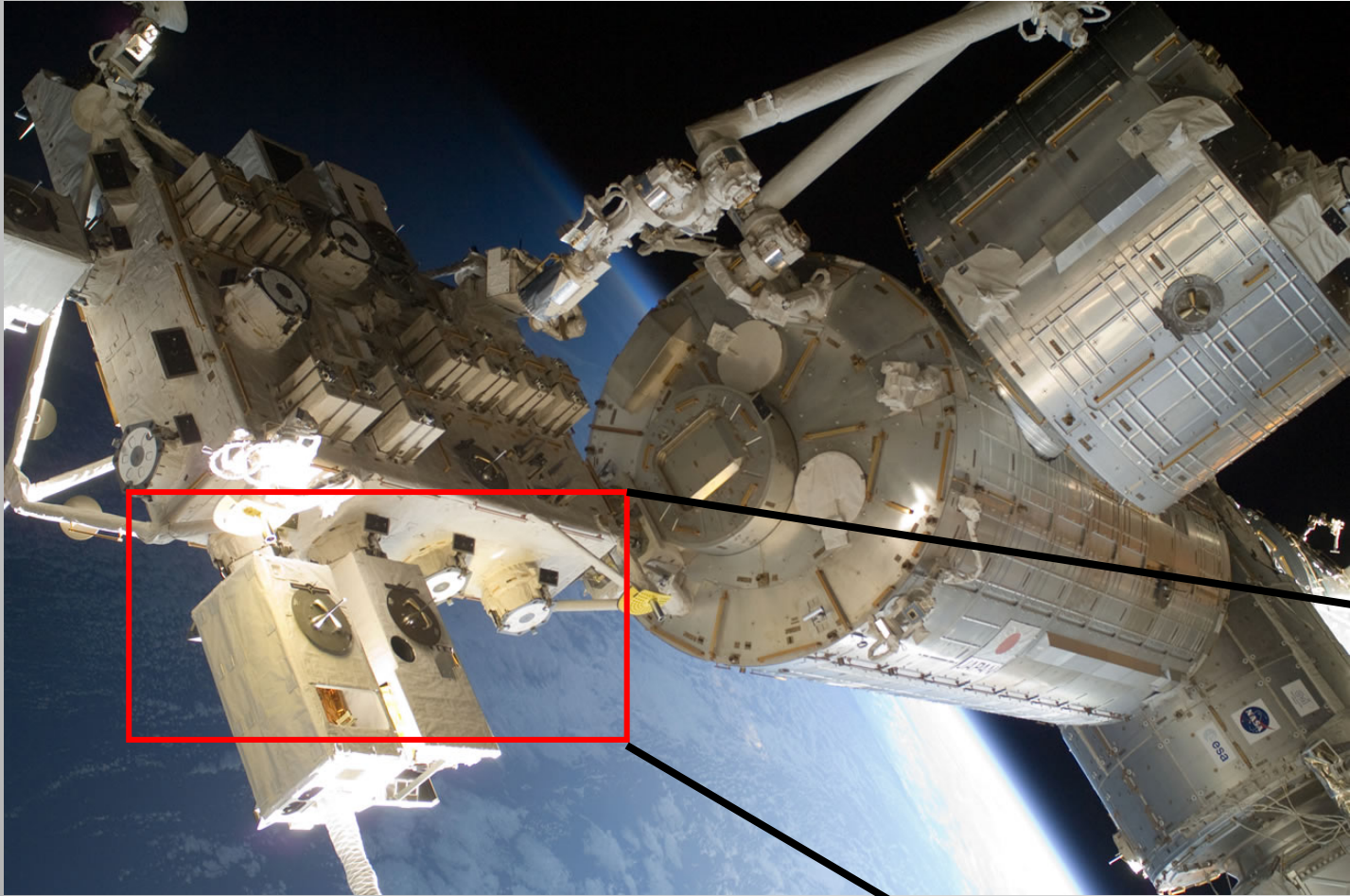
Patent pending

3U CubeSats (Up to 12)



\*Satellite shall meet all ISS payload safety requirements





# Satellite Manufacturing

*With our own turnkey small satellite and spectrum solution, we can integrate and launch your technology to provide you with Space Proven Hardware in less than 12 months*

- ❖ Cost Reasonable Satellite Testing Platform for Emerging Technologies
- ❖ In-house Full Stack Infrastructure from Build to Integration to Launch to Monitoring
- ❖ Established Partnerships with Launch Providers

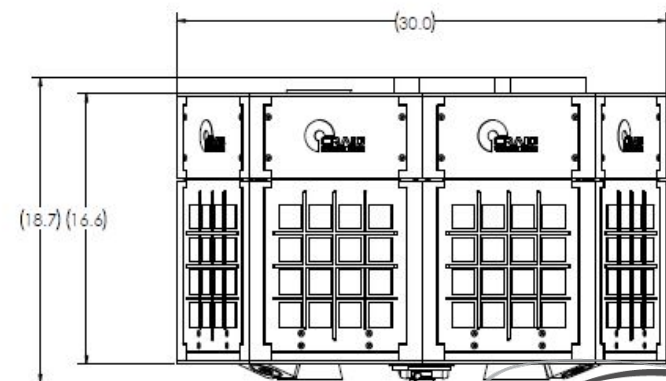
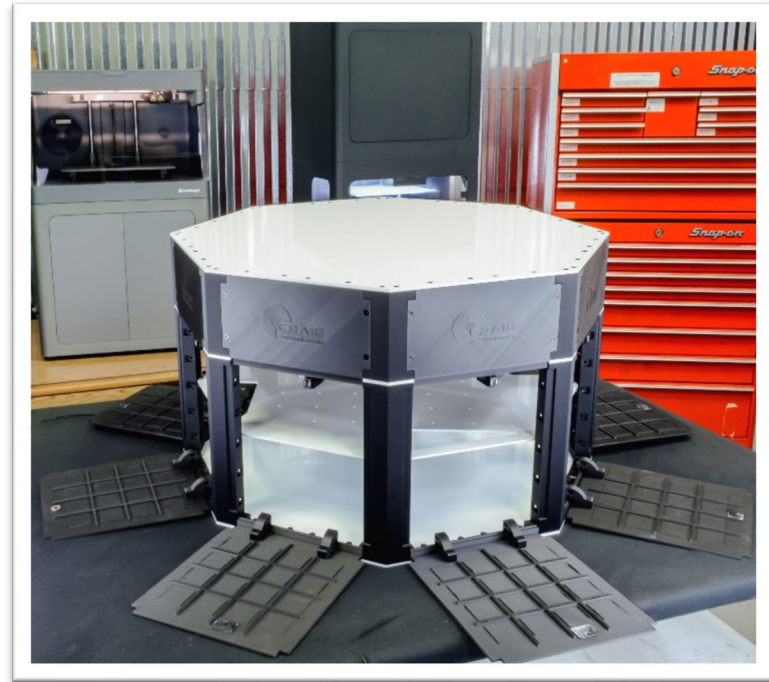
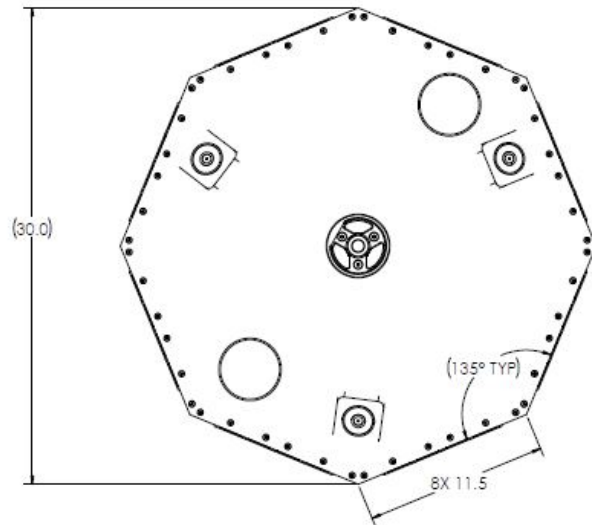
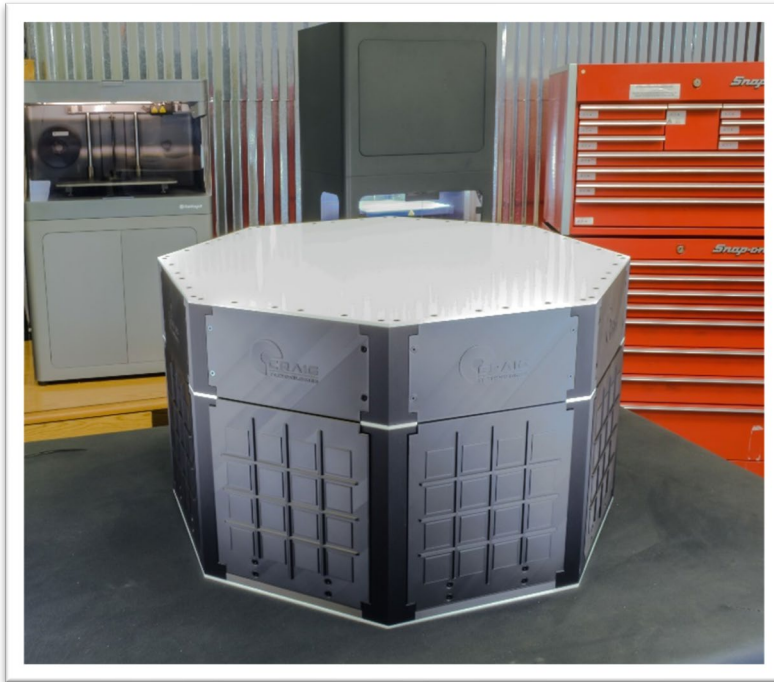


- ❖ Ground Support Services for Data and Customer Access





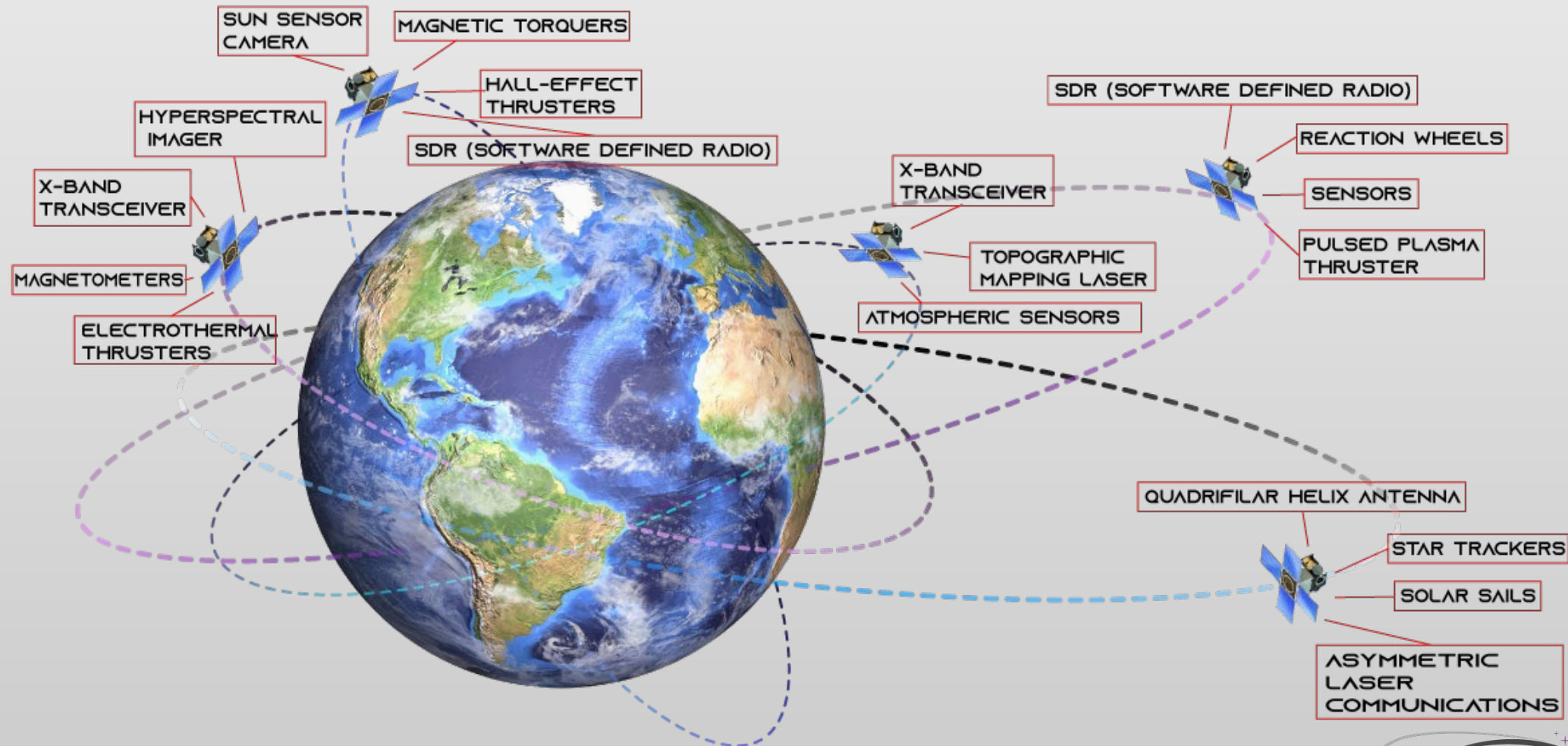
# LizzieSat-1



Patent Pending



# Satellite-as-a-Service – Delivering all that space has to offer





Sometimes you just have to jump  
and build your wings on the way down

