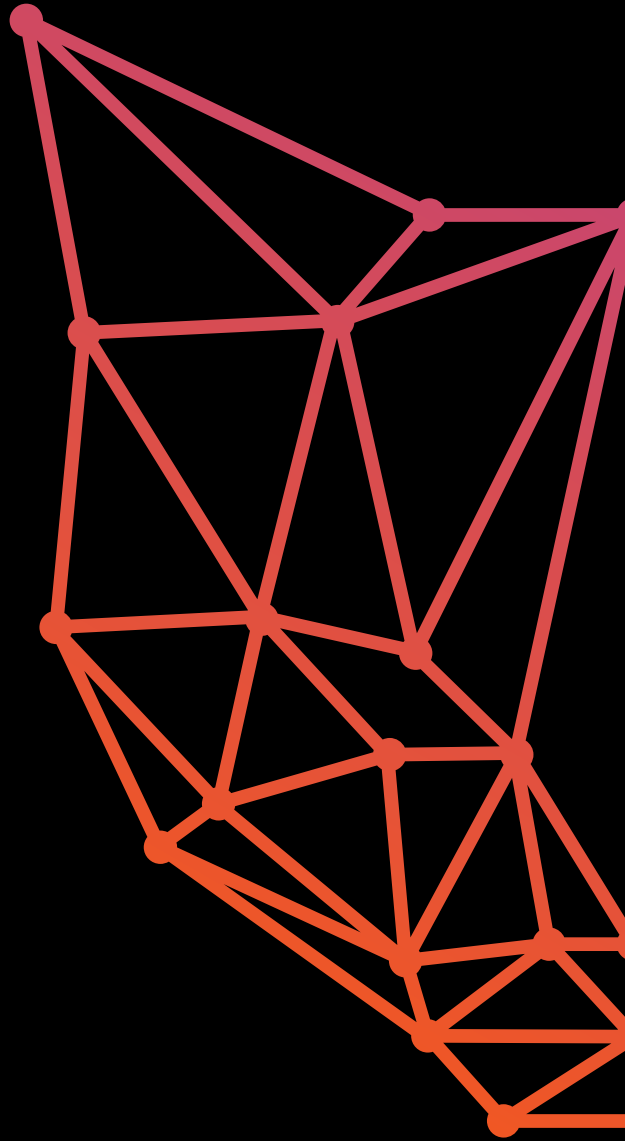


SPACE INVENTOR

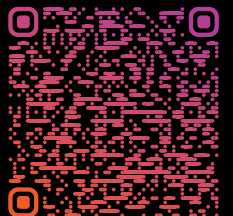
# SATELLITE SOLUTIONS



# Let's work together

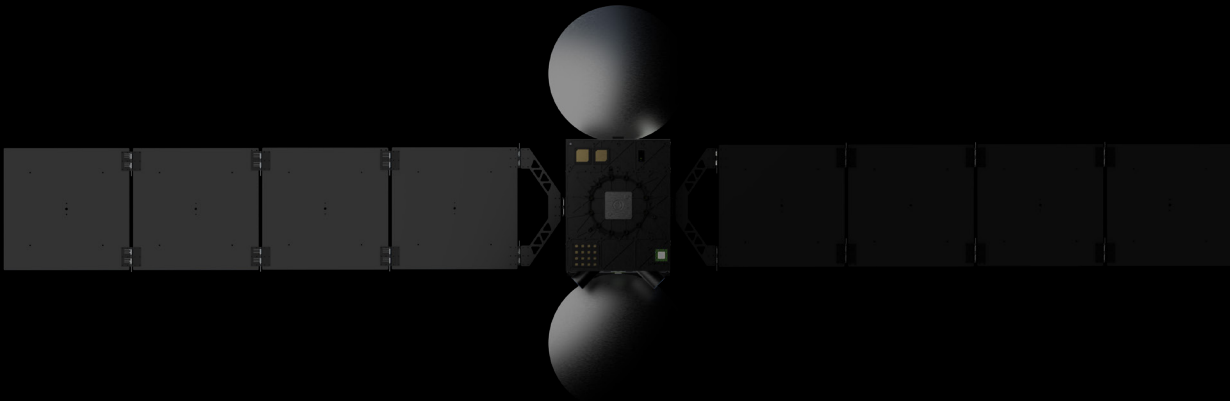
Don't hesitate to reach out for inquiries, collaboration or any specific questions you may have. We're always available for a discussion about your project and eager to assist you in achieving your space goals.

[Sales@space-inventor.com](mailto:Sales@space-inventor.com)



# Communication Solutions

# Geostationary Microsatellite



Small geostationary communications satellite engineered for LEO or GTO launch.

Experience the future of accessible satellite communication technology with Space Inventor's ESPA-class microsatellite platform tailored for geostationary communications services.

Our microsatellite possesses the latest advances in onboard propulsion enabling effortless manoeuvring from Geostationary Transfer Orbit or even circular Low Earth Orbit to Geostationary Orbit. Multiple transponder options available.

## Specs

- Orbit raising to GEO from equatorial LEO or GTO t in 6-8 months
- Ka/Ku band single beam transponders
- 500 mm deployable reflectors for 1200 km footprint
- 250 Mbps bent pipe (3 meter GND dish) or 25 Mbps (1 meter GND dish)
- Fall back global horn for TMTC at 100-1000 kbps
- Redundant fallback TMTC on S-band and X band
- Two-string redundant avionics bus
- 400 watt sun tracking solar arrays
- 15" separation ring, Falcon 9 Quarter plate compatible
- Deployed dimensions: 4.4m x 1.5m x 0.5m
- Wet mass: 60-70 kg



# 16U GEO for BIU

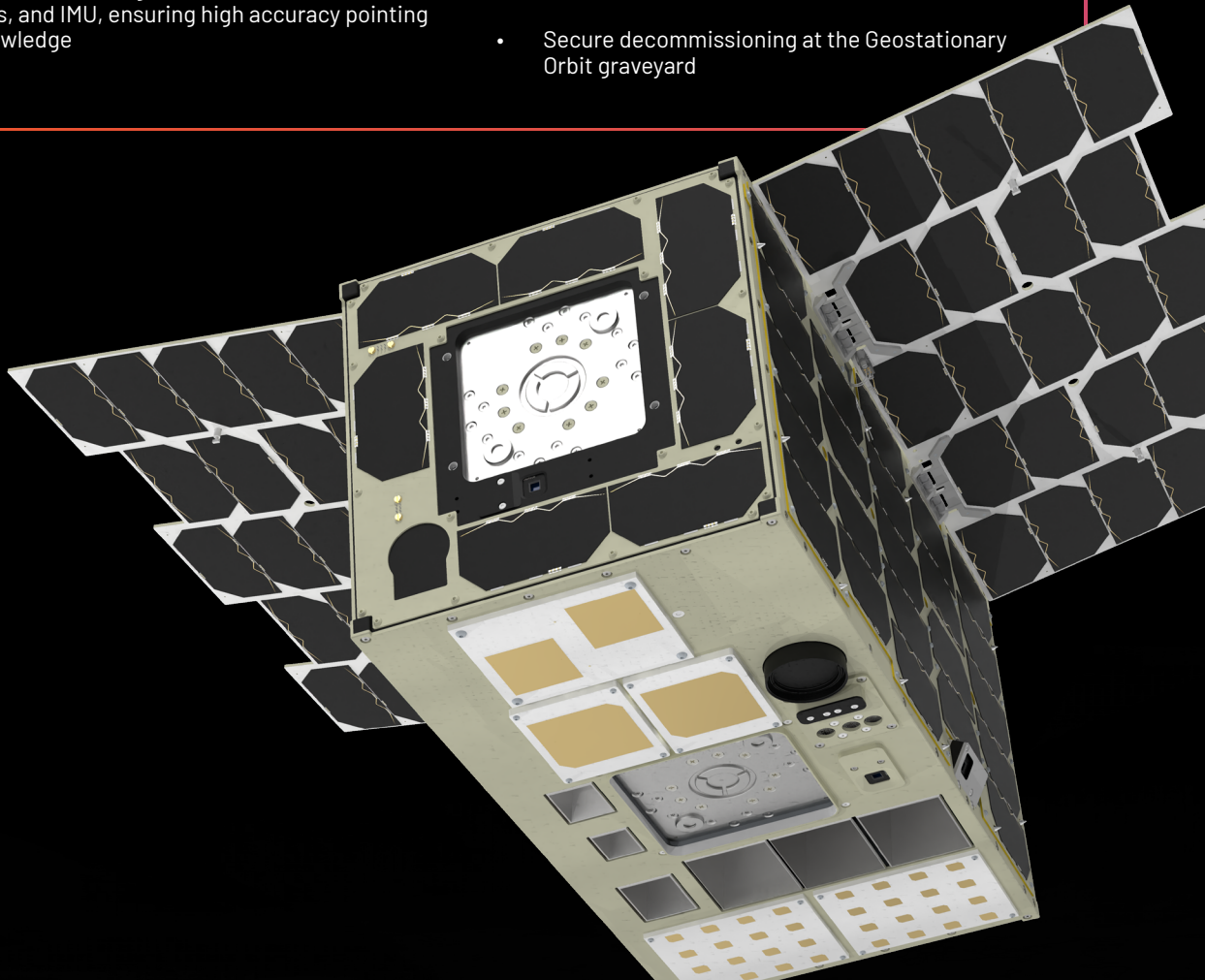
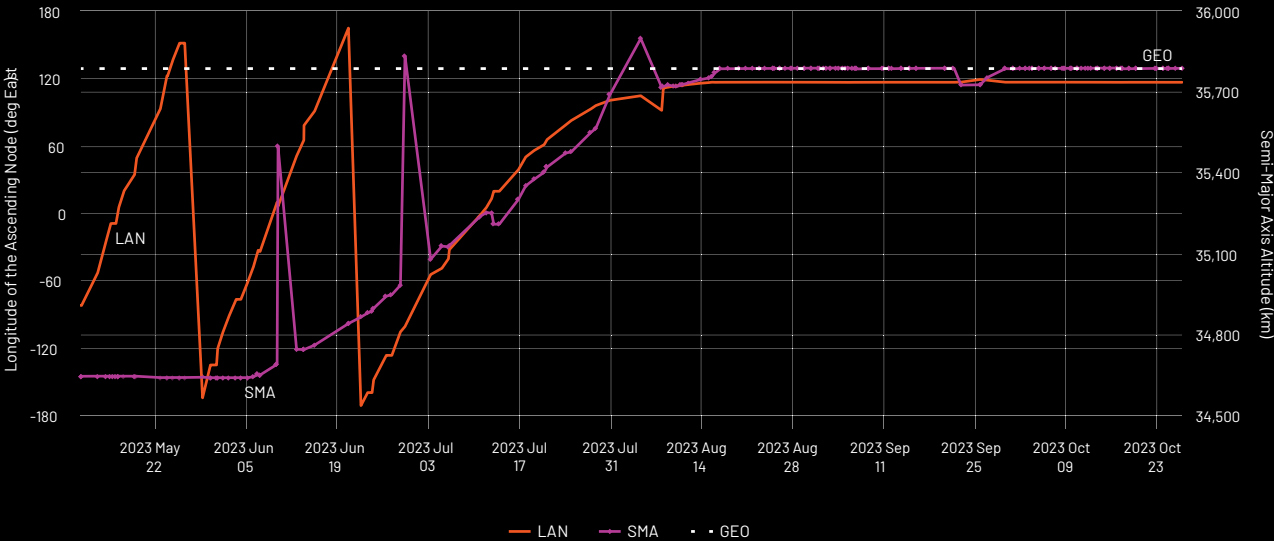
This high-tech 16U BIU (Bring-Into-Use) satellite has been designed for direct injection into geostationary orbit to provide bring-into-use services using Ka, Ku and other bands.

Space Inventor is the first company to make such a small satellite capable of raising its orbit by 1200 km concluding a journey of more than 28 million kilometres before entering the first service slot on the geostationary arc.

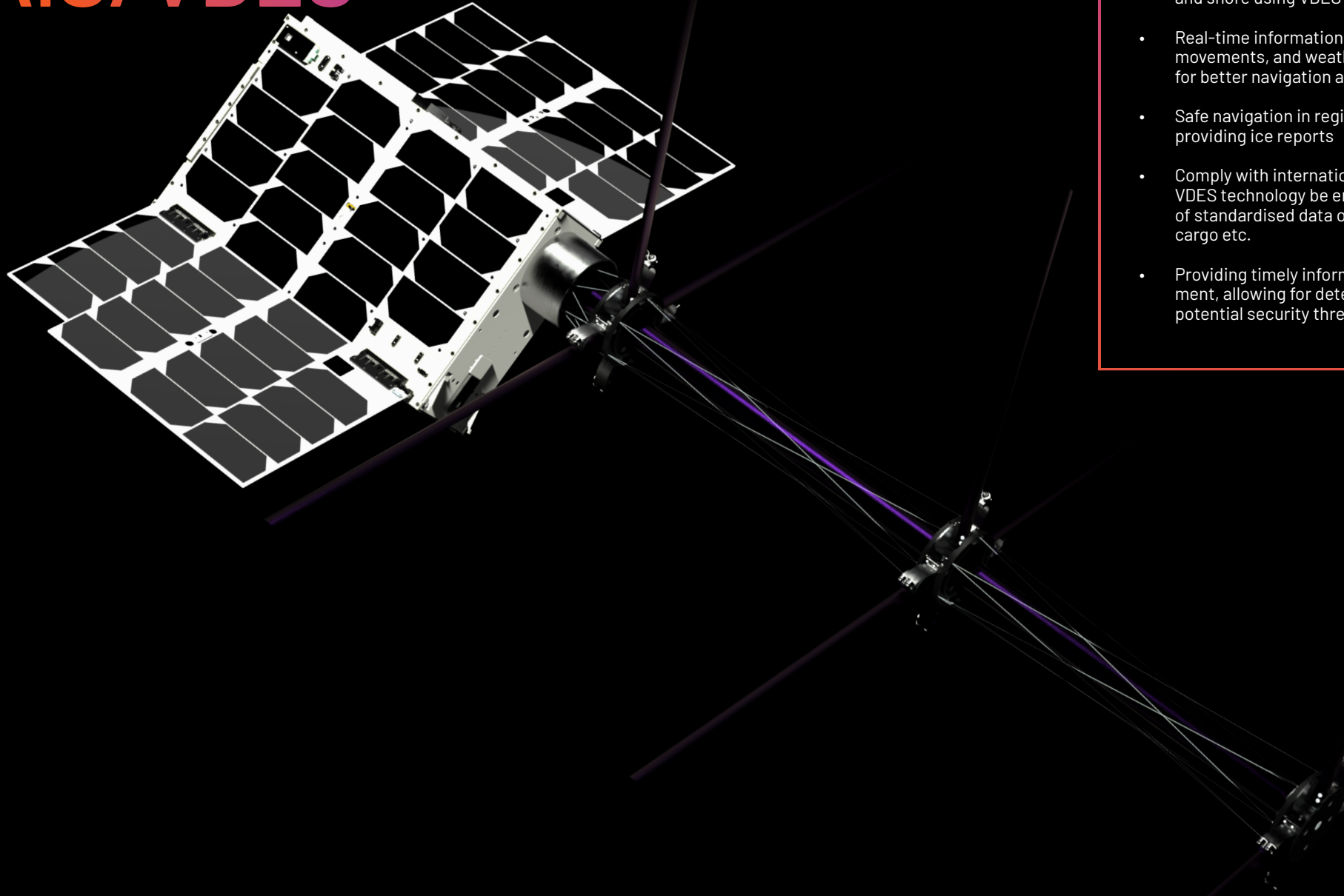
## Specs

- Equipped with Ka, Ku and Q/V band transceivers for comprehensive mission capabilities (bands can be customized)
- State-of-the-art power distribution modules for efficient energy management
- Equipped with a suite of cutting-edge attitude sensors, including star trackers, fine sun sensors, and IMU, ensuring high accuracy pointing knowledge
- Vectoring electric propulsion units for orbital manoeuvring and wheel unloading
- Capable of manoeuvring from different orbital slots in Geostationary orbit
- Four best-in-class momentum wheels with low micro-vibration levels guarantee precise control
- Secure decommissioning at the Geostationary Orbit graveyard

Beneath is a representation of Gravity Space ascending to GEO.



# AIS/VDES

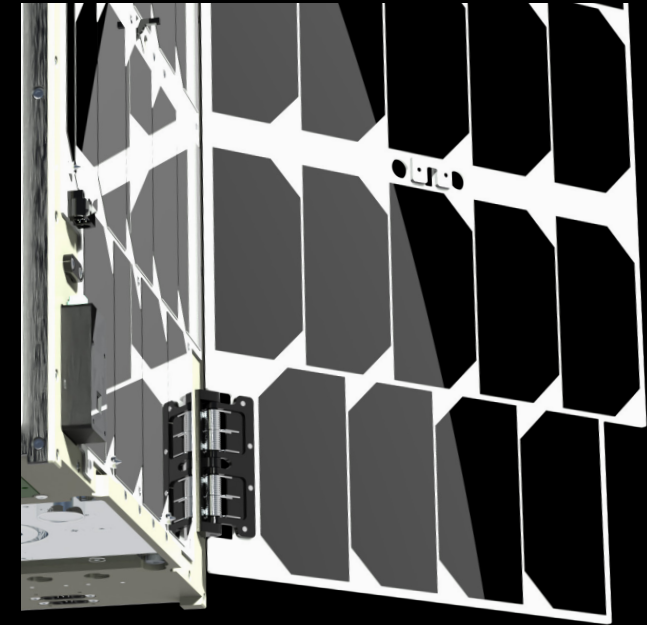


## Specs

- Enable communication between ship bridge and shore using VDES
- Real-time information on vessel positions, movements, and weather conditions, allowing for better navigation and collision avoidance
- Safe navigation in regions prone to ice by providing ice reports
- Comply with international regulations using VDES technology by enabling the transmission of standardised data on vessel identification, cargo etc.
- Providing timely information on vessel movement, allowing for detection and response to potential security threats and acts of piracy

Enhance maritime communication and navigation using Space Inventor's AIS/VDES satellite platform equipped with Space Inventor's high performing 3 element crossed deployable yagi antenna.

Elevate the efficiency, safety, and sustainability of maritime operations and infrastructure by utilising Space Inventor's VDES satellite platform.



# Student/HAM

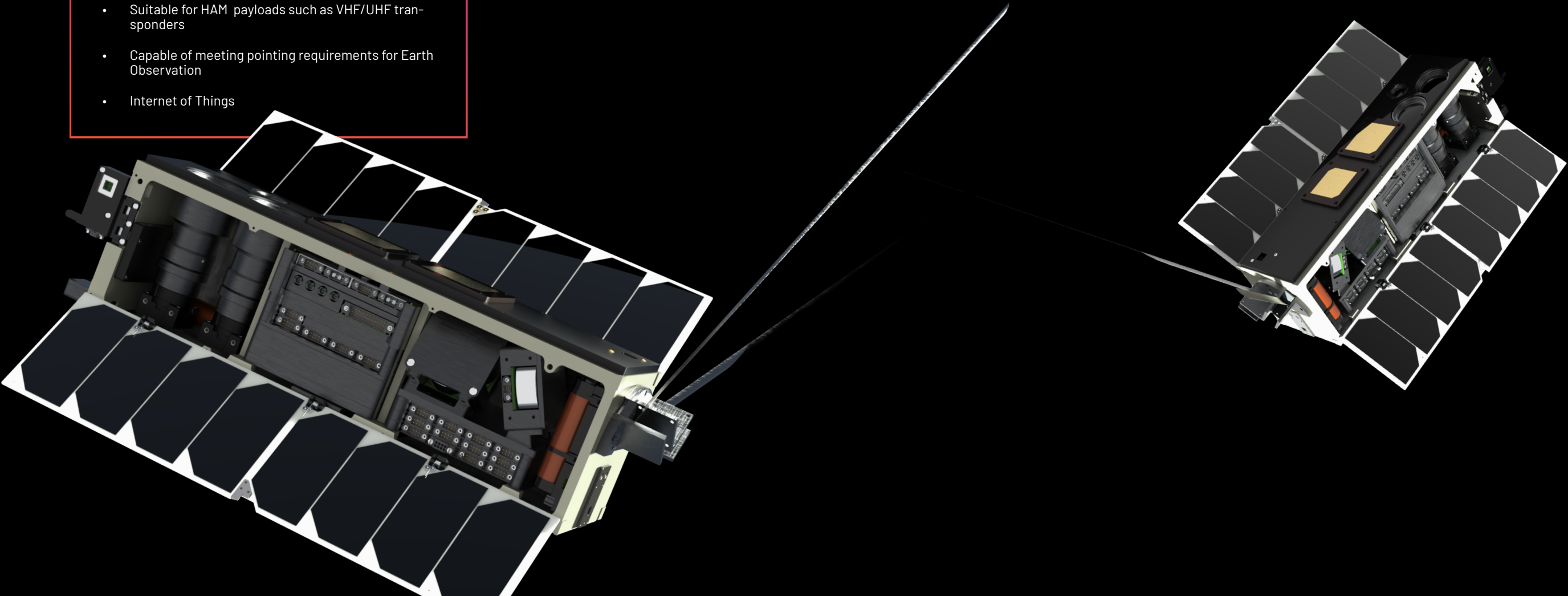
## Specs

- Fully customizable to meet mission requirements
- Suitable for HAM payloads such as VHF/UHF transponders
- Capable of meeting pointing requirements for Earth Observation
- Internet of Things

Space Inventor's student satellite platform made for research and education purposes.

Space Inventor's student satellites will empower students and institutions to pioneer space exploration.

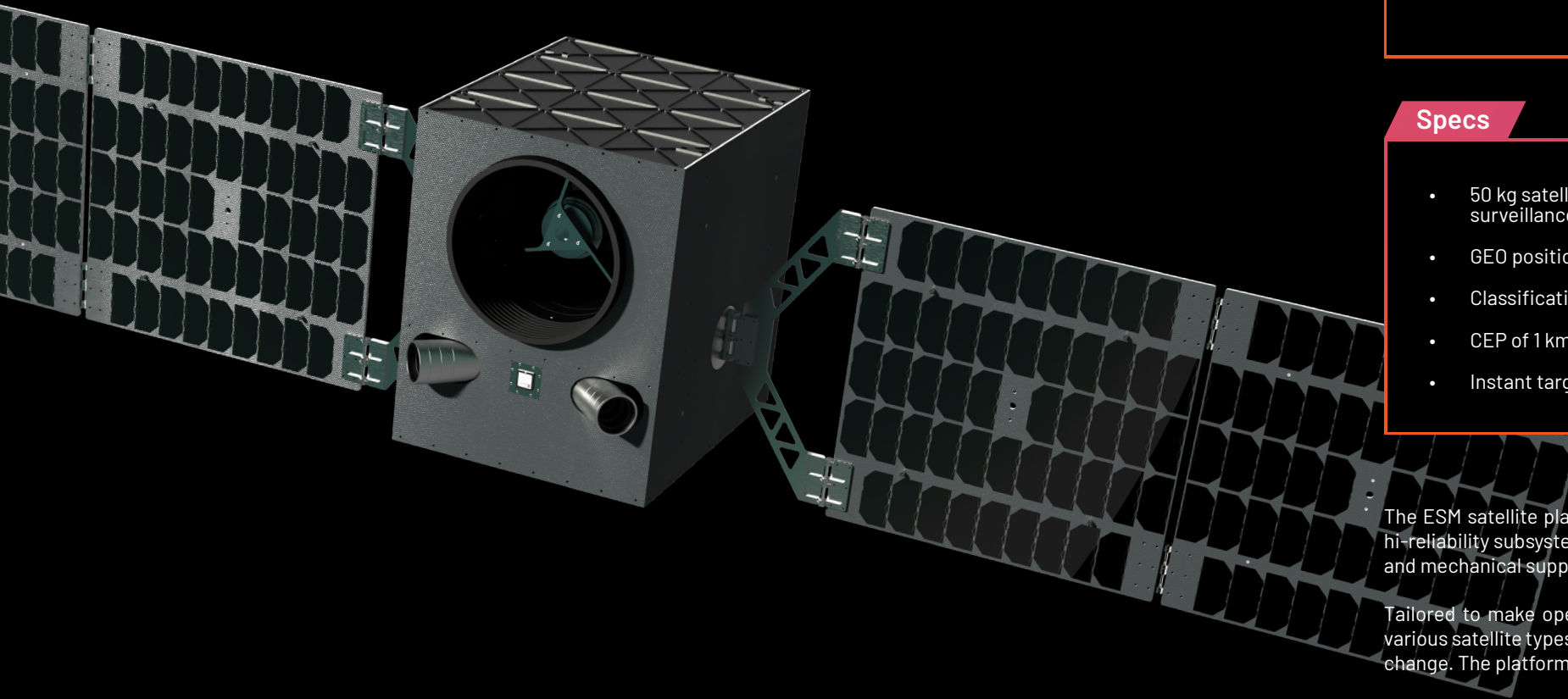
The student satellite is equipped with state of the art technology allowing for technology demonstrations, observations and research with high requirements.



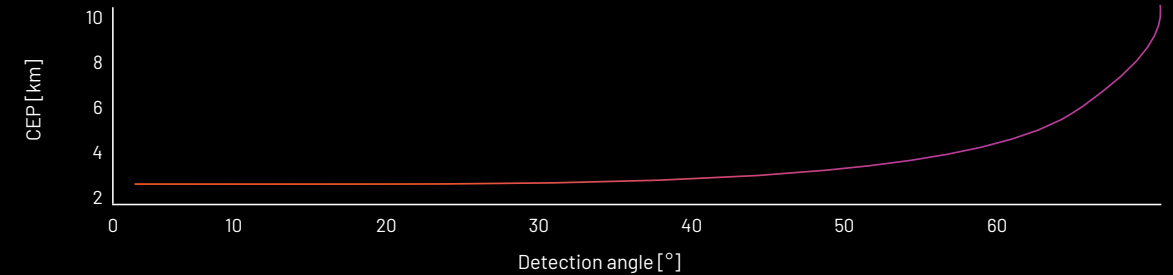
# Defence and Security Solutions



# ESM Satellite Platform



## Performance



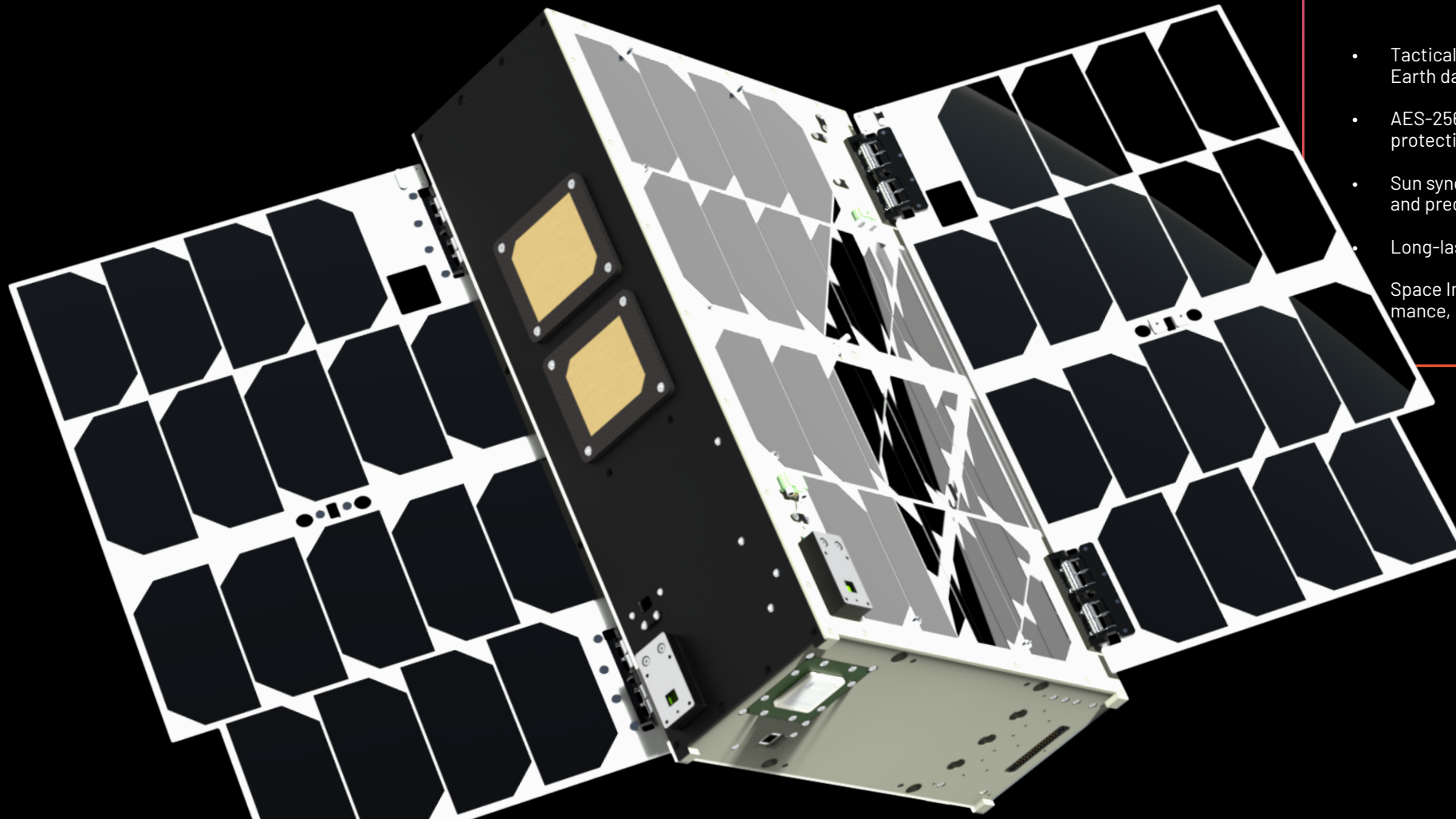
## Specs

- 50 kg satellite for optical and RF recon and surveillance
- GEO positioning of RF emissions
- Classification of ship radar signatures
- CEP of 1 km from Low Earth Orbit
- Instant target detection report via Inmarsat
- Optical earth observation
- 1 meter resolution in mono or multi-spectral
- High bandwidth data downlink
- Secure communication
- Battle Management System integration

The ESM satellite platform from Space Inventor is a model of quality and reliability. The design of the platform integrates hi-reliability subsystems, which each have specific features like radiation shielding, EMI shielding, thermal conduction path, and mechanical support.

Tailored to make operational work efficient, the satellite platform allows teams to become experts as they work across various satellite types on the same platform. This eliminates the need to adjust to a different platform with each satellite type change. The platform also allows the possibility of component exchanges with any new technology as desired

# Tactical communications



Space Inventor's high performing 6U satellite for tactical and secure communication between space and earth.

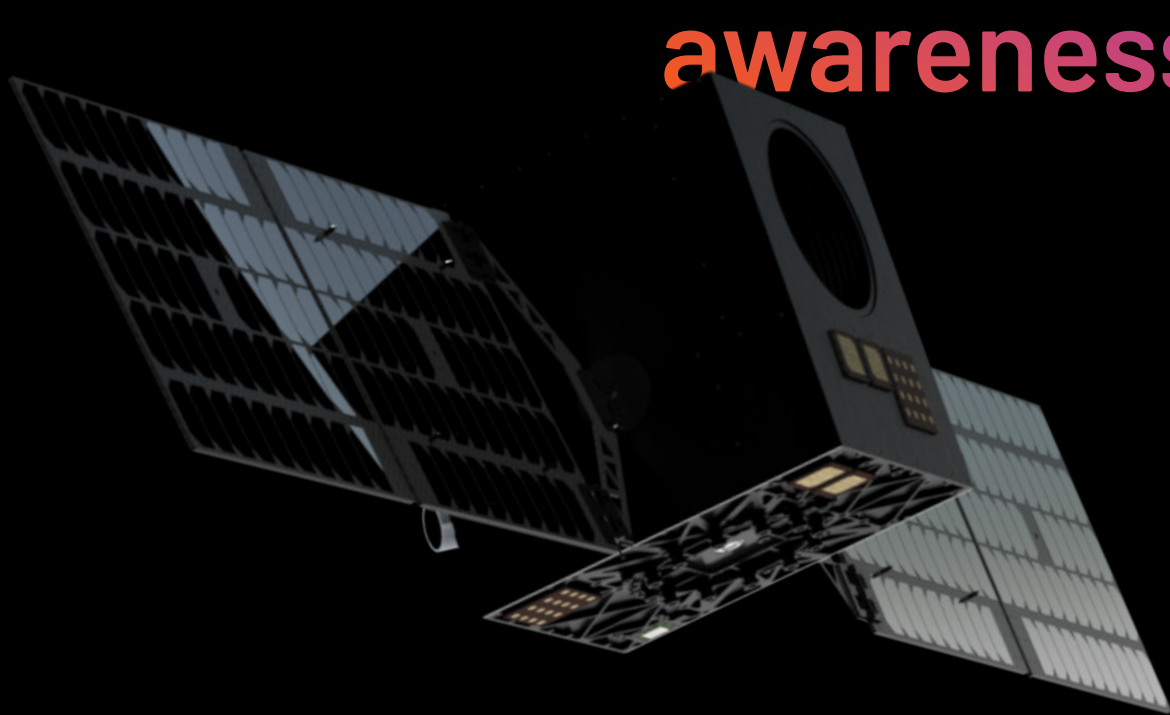
With a projected 10-year mission life, it assures enduring performance. Employing robust AES-256 encryption, it guarantees secure communication. Access is fortified through SSH, WebAPI, and stringent password protocols.

This satellite serves as your conduit to advanced and secure space-based communication. Elevate your capabilities with our advanced technology, enabling tactical and secure communication between satellite and Earth.

## Specs

- Tactical communication: Secure space-to-Earth data exchange
- AES-256 encryption: Ensures robust data protection
- Sun synchronous LEO orbit: Optimal coverage and precision
- Long-lasting operational capability
- Space Inventor subsystems: High-performance, low EMI integration
- Cubesat Space Protocol 2.0: Efficient internal/external communication
- Secure access: SSH, WebAPI, password authentication
- Countdown timer: Enables tactical routing for continuity
- Payload access: Unrestricted via CSH shell
- Safe decommissioning: Atmosphere disposal protocol

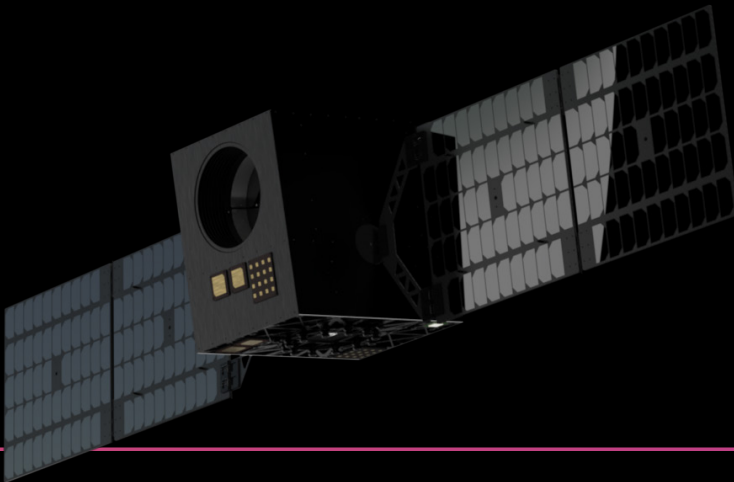
# Space domain awareness



Space Inventor’s microsatellite with advanced Space Domain Awareness (SDA) capabilities offers real-time tracking, detection, and characterization of space objects, ensuring collision avoidance and safeguarding critical assets.

Elevate your space operations with this indispensable tool, designed to protect your investments, support military missions, and foster responsible space activity.

Space Inventor’s satellite with SDA capabilities does not only enhances its own safety and security but also contributes to the broader efforts to ensure the sustainable and secure use of space for all space-faring entities



## Specs

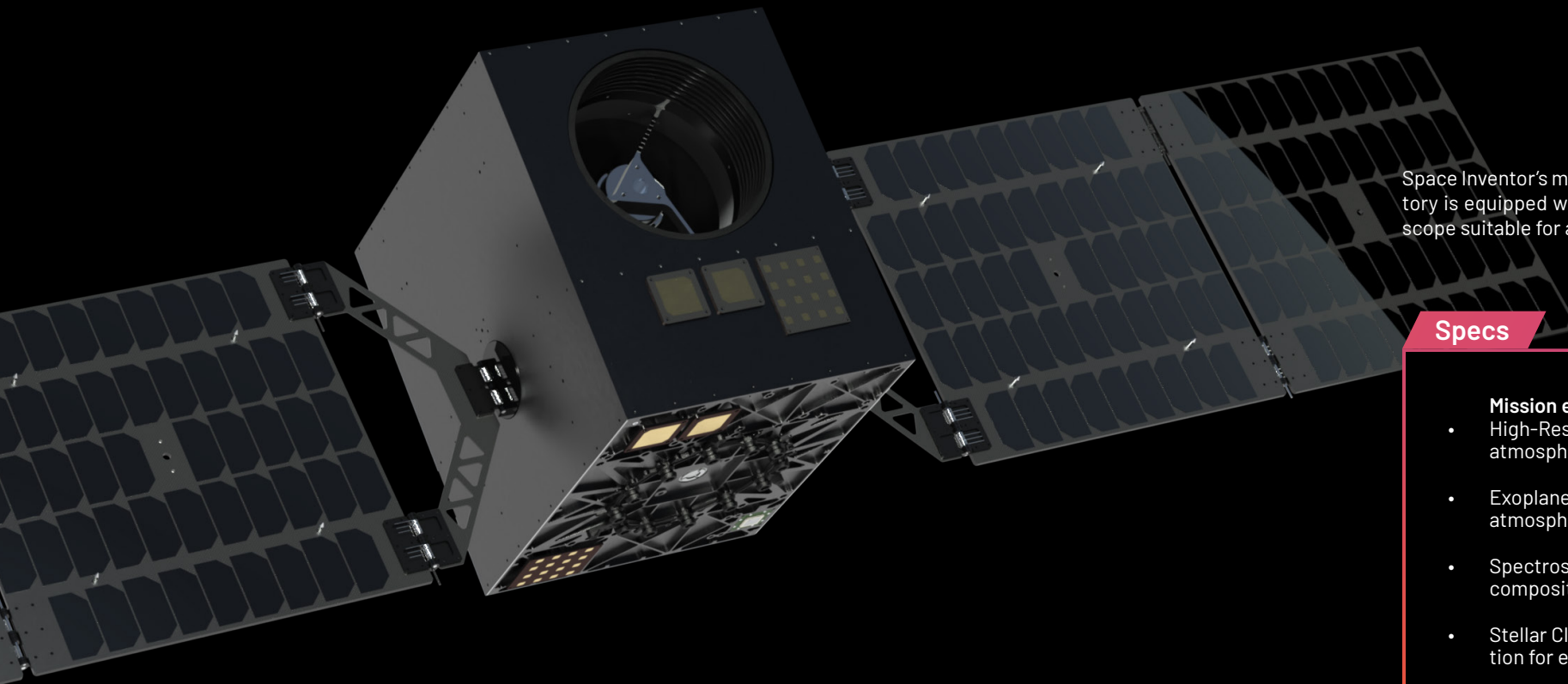
**Mission examples:**

- Comprehend, monitor, and predict activities and objects in space
- Identifying, tracking, or characterising satellites, debris, and other space-based assets
- Enables early detection of potential threats, collision prevention in orbit, and aids in strategic decision-making
- Advanced data processing and analytics are employed to provide real-time situational awareness and actionable intelligence
- Ensures the continued operation of vital space-based systems, contributing to national security and defence in a contested space domain
- Redundant TMTC on S-band and X band
- Two-string redundant avionics bus
- 250 watt sun tracking solar arrays
- 8” separation ring, Falcon 9 Quarter plate compatible
- Deployed dimensions: 3 m x 0.5m x 0.5m
- Wet mass: 45 kg

# Optical Solutions



# Astro observatory



Space Inventor's microsatellite configured for astro observatory is equipped with a cutting-edge 300 mm aperture telescope suitable for a range of cameras.

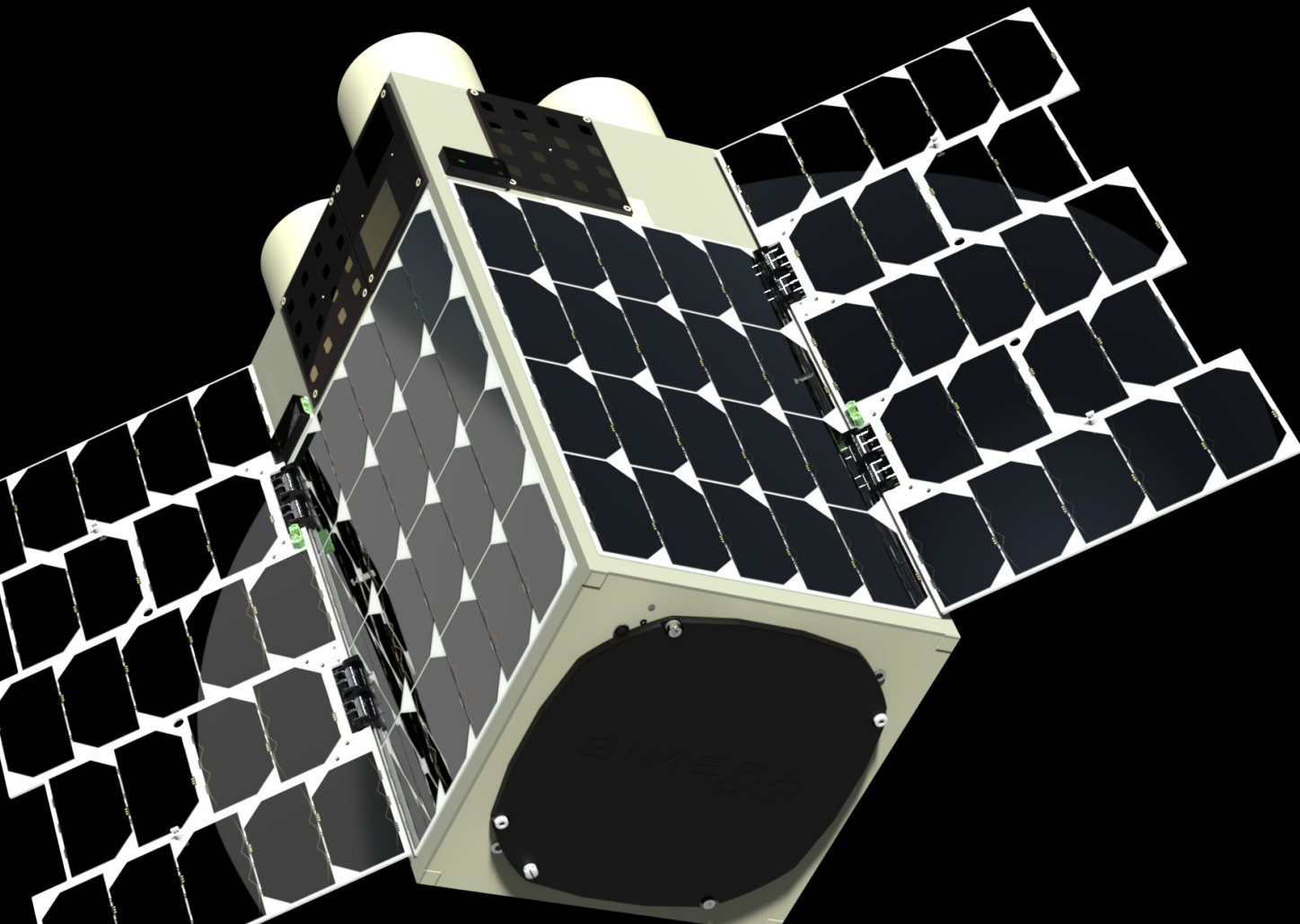
## Specs

### Mission examples:

- High-Res Imaging: Detailed star surface and atmospheric analysis
- Exoplanet Transit Studies: Size, orbit, and atmosphere calculations
- Spectroscopic Analysis: Temperature, composition, and kinematics
- Stellar Classification: Precise star categorization for evolutionary insights
- Variable Star Monitoring: Tracks brightness changes for pulsations and binaries
- Redundant TMTC on S-band and X band
- Two-string redundant avionics bus
- 250 watt sun tracking solar arrays
- 8" separation ring, Falcon 9 Quarter plate compatible
- Deployed dimensions: 3 m x 0.5m x 0.5m
- Wet mass: 45 kg

Optical Solutions

# 16U Hyperspectral 200mm



Space Inventor's 16U satellite equipped with a cutting-edge hyperspectral 200mm telescope made for unlocking unparalleled capabilities, empowering groundbreaking scientific and environmental missions.

From precise astronomy insights to game-changing environmental monitoring, its advanced imaging prowess revolutionizes research.

This satellite is poised to redefine what's possible in space-based observation, offering a competitive edge for research institutions and environmental agencies alike

## Specs

### Mission examples:

- Precision Agriculture Monitoring for Optimal Crop Management
- Environmental Hazard Detection, Including Oil Spills and Chemical Leaks
- Stellar Spectroscopy for Detailed Star Analysis 16U CubeSat Configuration for Compact Form Factor
- Hyperspectral 200mm Telescope Enables Broad Wavelength Range Imaging
- Fully redundant avionics bus
- High speed data downlink
- Onboard Processing for Real-Time Data Analysis

