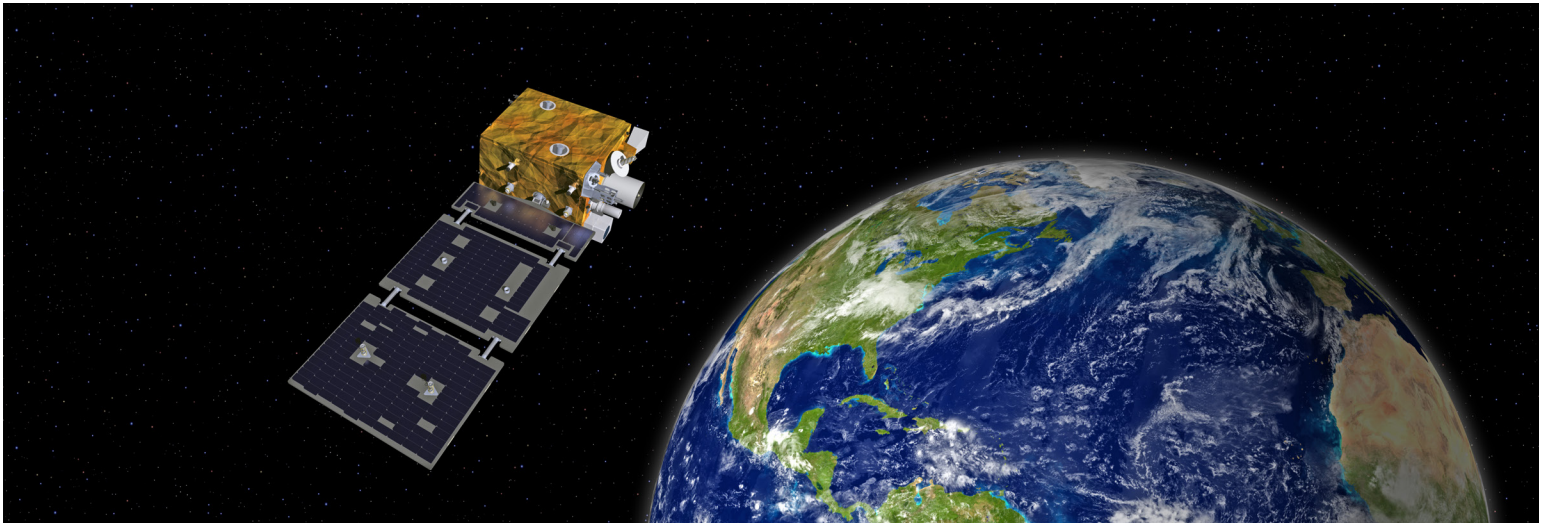


ESPASat

Flexible, Affordable Access to Space

FACT SHEET



Design

Orbital ATK's ESPASat is a highly agile spacecraft bus designed to perform experiments in the GEO disposal orbit. ESPASat is compatible with Orbital ATK's ESPASat spacecraft and the standard EELV Secondary Payload Adapter (ESPA) as a separable payload, and it is designed for EELV launch loads. ESPASat can accommodate a variety of instruments depending on mission requirements, and provides comprehensive interface resources to support payload command, telemetry and mission data management services.

Mission Opportunities

- Technology Demonstration
- Space Situational Awareness (SSA)
- Guidance, Navigation, and Control
- Space Science

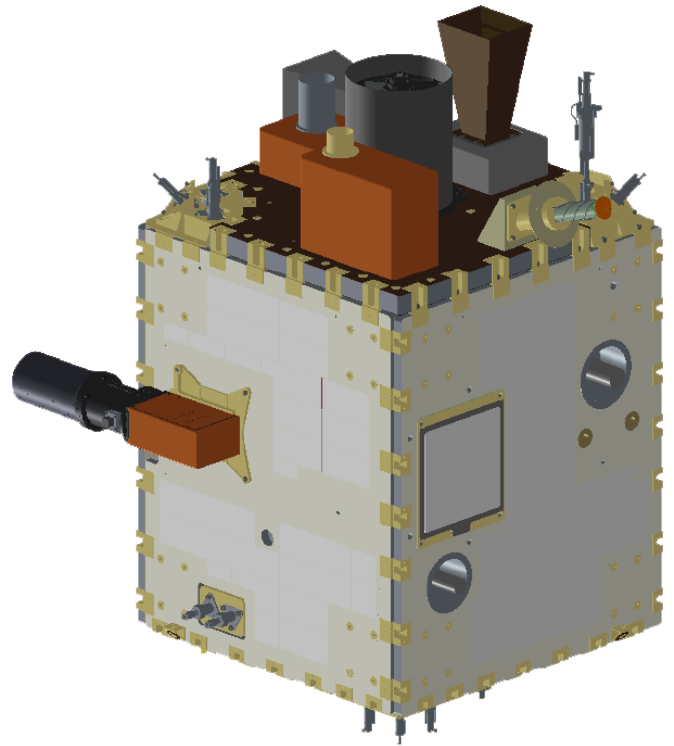
FACTS AT A GLANCE

- ESPA/Secondary launch compliant
- 70kg nominal dry mass
- 30kg payload capability
- >400m/s ΔV (full fuel load)
- 30Watts OAP, 60Watts peak - payload
- 6DoF attitude control using wheels and thrusters
- Attitude knowledge < 70 μ rad, 1σ
- Position knowledge < 10 m accuracy
- 1.5° per second slew rate
- Computing architecture with available Virtex 5 FPGA
- High speed payload data interfaces (Spacewire, SERDES)
- >256kbps 4π steradian coverage to AFSCN with Type I encryption
- <24 month bus delivery
- 3-5 year on-orbit life

Specifications

Spacecraft

Orbit:	GEO
Design Life:	Three years, single string
Dry Mass (no P/Ls):	70 kg
Dimensions (no P/Ls):	22.3" x 22.3" x 27.4"
Fuel Capacity:	22.7 kg, Hydrazine
Payload Mass:	30 kg
Total Power:	265 W
Payload Power (OAP/Peak):	30/60 W
Battery:	24 A hr Li Ion
Downlink/Uplink Rate:	256 kbps/2 kbps via AFSCN + Type 1 encryption
Data Storage:	12 GB
Attitude Knowledge:	< 70 μ rad, 1 σ
Slew Rate:	1.5 deg/sec
Position Control:	6 DoF Control using wheels and thrusters
Position Knowledge:	< 10 m
Avionics:	IAU, BRE440 Processor, Virtex 5 FPGA



Launch Vehicle

EELV compatible

Product Line Heritage

ANGELS – Automated Navigation and Guidance Experiment for Local Space

- On-orbit and functioning since July 2014

Mycroft Experiment– AFRL

- Scheduled to launch 2018



Solar Array Deployment

About Orbital ATK

Orbital ATK is a premier provider of space logistics and engineering services, and a manufacturer of a family of agile, reliable spacecraft. Orbital ATK brings heritage with more than 30 years of satellite system experience and an outstanding on-orbit satellite mission success record.