BAE Systems

Satellite Platform - P30

The BAE Systems Satellite Platform P30 is a compact spacecraft platform designed under the ESA Pioneer Programme. Suitable for orbits 400 km to 600 km with flexible payload accommodation, affordability, and full redundancy. Our open architecture allows for a diverse and wide supply chain of many different platform equipment items, thereby allowing it to scale and flex to meet changing mission requirements.

Key Features

- Flexible and scalable to mission requirements and objectives
- Accommodates up to 18 payloads
- Open Architecture
- User customisable mission software
- High data downlink capability
- High power generation
- Payload Mass 70 kg

Digital Intelligence

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Technical Specification

Parameter	Capability
Mission Design Level	
Orbit Type	Low Earth Orbit
Altitude	400-600 km
Inclination	0° to 97.8°
Mission Lifetime	5 Years
Platform Level	
Max Wet Spacecraft Mass (Platform, Payload, Propellent)	300 kg
Stowed Spacecraft Dimension (LxWxH)	1 m x 0.9 m x 0.9 m
Deployed Spacecraft Dimension (LxWxH)	4 m x 0.9 m x 0.9 m
Launcher Compatibility	Rideshare options including: Falcon 9 (Full Plate, Full Plate-XL) Ariane-6 (Hub Port) PSLV (Upper / Lower) Skyrora XL (Standard Fairing) ABL RS1 (XL Fairing)
Redundancy	Redundant platform core avionics
BOL Power Generation (500km SSO with 10:30 LTAN)	Nadir: >100W OAP / Sun Pointing: >220W OAP
Battery Capacity / Voltage	518 Wh / 28V (±4V)
Stabilisation Method	3-axis
Pointing Modes	Nadir, Sun, and Inertial Tracking; Static Ground Tracking; Forward Motion Compensation
Attitude Absolute Knowledge Error	0.049° 3σ (half-cone)
Attitude Pointing Error	0.016° 3σ (half-cone)
Slew Rates	1.5°/second
Positional Accuracy	10 m
Propulsion System	Electric Propulsion
Propulsion Total Impulse / Thrust / dV	30 kNs / 10 µN to 1mN / 100 m/s
Command and Telemetry (Native bit rates)	S-Band Uplink: 1300 kbps Downlink: 2200-4000 kbps
High Speed Downlink (Native bit rates)	X-Band Downlink: 600 Mbps
On Board Storage	4TB
Payload Level	
Payload Mass Capability	70 kg
Payload Volume Capability (LxWxH)	0.8 x 0.8 x 0.45 m
Payload Field of View	Hemispherical open concept
Number of Payloads	Up to 18 payloads possible
Payload Switch Voltages Available	Unregulated: 28V (±4V) / Regulated: 3.3V, 5V, and 12V
BOL OAP Payload Power	Nadir: >40W OAP Sun Pointing: >160W OAP
Payload Interfaces	RS422, CAN, LVDS, Ethernet

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