

# BAE Systems Satellite Platform - P20



The BAE Systems Satellite Platform P20 is a compact spacecraft platform designed for High Thrust and High Delta V missions in orbits from 375 km to 600 km. Flexible payload accommodation, affordability, and full redundancy has been at the heart of this development.

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## Key Features

- Compact design
  - Suitable for VLEO orbit (375 km)
  - Designed for High Thrust and High Delta V
  - Payload Mass 40 kg
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# Technical Specification

Parameter	Capability
<b>Mission Design Level</b>	
Orbit Type	Low Earth Orbit
Altitude	375-600 km
Inclination	0° to 97.8°
Mission Lifetime	5 Years
<b>Platform Level</b>	
Max Wet Spacecraft Mass (Platform, Payload, Propellant)	225 kg
Stowed Spacecraft Dimension (LxWxH)	0.8 m x 0.8 m x 0.9 m
Deployed Spacecraft Dimension (LxWxH)	3.8 m x 0.8 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 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 Pointing; Static Ground Target 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	Green Chemical Propulsion
Propulsion Total Impulse / Thrust / dV	23 kNs / 1000 mN / 102 m/s
Command and Telemetry	S-Band Uplink: 1300 kbps Downlink: 2200-4000 kbps
High Speed Downlink	X-Band Downlink: 600 Mbps
On Board Storage	4TB
<b>Payload Level</b>	
Payload Mass Capability	40 kg
Payload Volume Capability (LxWxH)	0.6 x 0.8 x 0.45 m
Payload Field of View	Hemispherical open concept
Number of Payloads	Typically up to 6 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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BAE Systems, Surrey Research Park, Guildford, Surrey, GU2 7RQ, UK

E: [space@baesystems.com](mailto:space@baesystems.com) | W: [baesystems.com/futurespace](http://baesystems.com/futurespace)

[in linkedin.com/company/baesystemsdigital](https://www.linkedin.com/company/baesystemsdigital) [X @BAESystemsDigi](https://twitter.com/BAESystemsDigi)

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