


PHOTON

A SATELLITE CREATED BY  ROCKET LAB

END-TO-END MISSION DESIGN AND DELIVERY, FROM IDEA TO ORBIT.

As the global leader in small satellite launch, Rocket Lab has now introduced the next evolution of its mission services; the in-house designed and built Photon satellite platform.

Rocket Lab now delivers an all-inclusive spacecraft build and launch service that enables small satellite customers to focus on delivering their service from orbit and generating revenue, rather than building their own satellite hardware. Our customers simply bring their payload or idea and we do the rest, taking care of the complete satellite build and launch service as a bundled and streamlined experience.

Photon is an advanced and planned evolution of the Rocket Lab Kick Stage. Operating a high-powered iteration of the flight-proven 3D printed Curie propulsion system, Photon can support missions with up to a five year on-orbit life span. Equipped with an S-band communication system, a high-fidelity attitude control system, and a robust avionics suite, Photon is the complete spacecraft solution for a range of LEO missions, from constellation development, through to technology demonstrations and hosted payloads.

TURNING POSSIBILITY INTO CAPABILITY ON ORBIT

THE ROCKET LAB MISSION EXPERIENCE



DESIGN



MANUFACTURE



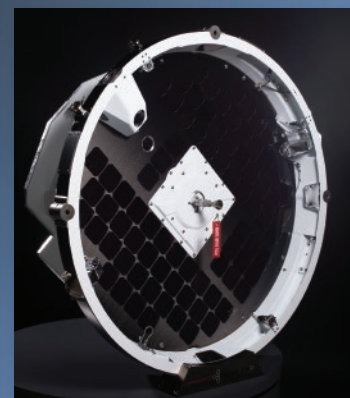
INTEGRATION



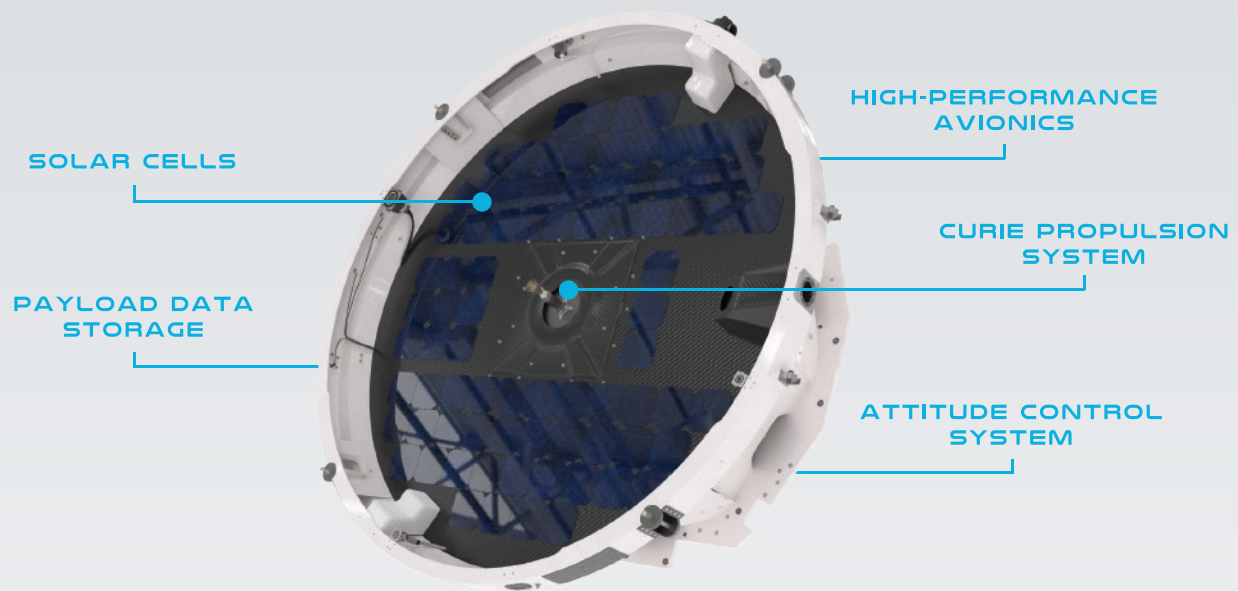
TEST



LAUNCH



PHOTON, THE ROCKET LAB SATELLITE



We simplify and streamline access to space. No two missions are the same, so we've created a configurable platform that can be tailored to your mission.

PERFORMANCE SPECIFICATIONS

Available payload mass	Up to 170 kg (orbit and configuration dependent)
Available payload volume	Electron fairing envelope
Payload power (peak)	100 W to 1 kW
Payload energy/orbit	Up to 300 Whr
System voltage	28 V unregulated; regulated options available
Pointing accuracy	5 deg to 50 arc-sec
Slew rate	Up to 5 deg/s
Pointing stability	Up to TBS arcsec/sec
Orbit knowledge	5 - 10 m
Delta-v capacity	Payload dependent
Payload data interfaces	LVDS, ethernet, CAN, RS422/485
Payload data storage	Up to 1 TB
Telemetry & command frequencies	S-band (space operations)
Telemetry and command data rate	Up to 512 kbps
Payload transmitter	Payload dependent; multiple options available
Orbit type and lifetime	LEO > 5 years

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