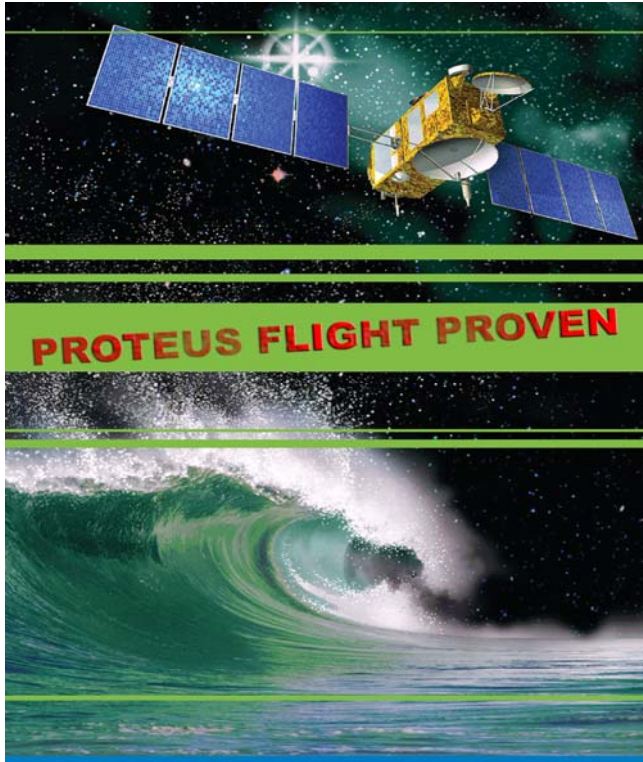




PROTEUS: a multimission platform reconfigurable for Earth observation, telecommunications or science missions in low Earth orbit



THE PROTEUS PACKAGE

- **Generic service module, tailored and qualified to your requirements.**
- **Payload module readily adaptable to your application.**
- **Flexible flight software.**

LAUNCH VEHICLE

The Proteus service module is compatible with all launch vehicles with a payload capacity between 500 and 1,000 kg. The only limits are those imposed by the customer's payload.

SERVICE MODULE

- Reliable, robust and autonomous
- Simple, proven solutions
- Redundant design for all vital components and subsystems
- Centralized architecture with autonomous fault passivation
- Continuous service
- Space qualified.

AOCS

The precision AOCS (Attitude and Orbit Control Systems) features a fully redundant configuration of rate gyros, star trackers, GPS receivers, reaction wheels and magnetic torquers to offer:

- excellent overall performance and pointing accuracy
- stable operation and high precision
- high degree of onboard autonomy and positioning

A COST-EFFECTIVE SOLUTION

- Recurrent low-cost service module compatible with a wide-range of missions
- Platform and payload can be readily integrated and tested concurrently
- Standard control ground segment ensures reduced operating costs

PAYLOAD

Proteus is designed for LEO payloads in the 300 Kg/300 W class. The platform also offers a 2-Gbyte mass memory and a 690-kbits/s S-band telemetry transmitter.

ORBITS AND LIFETIME

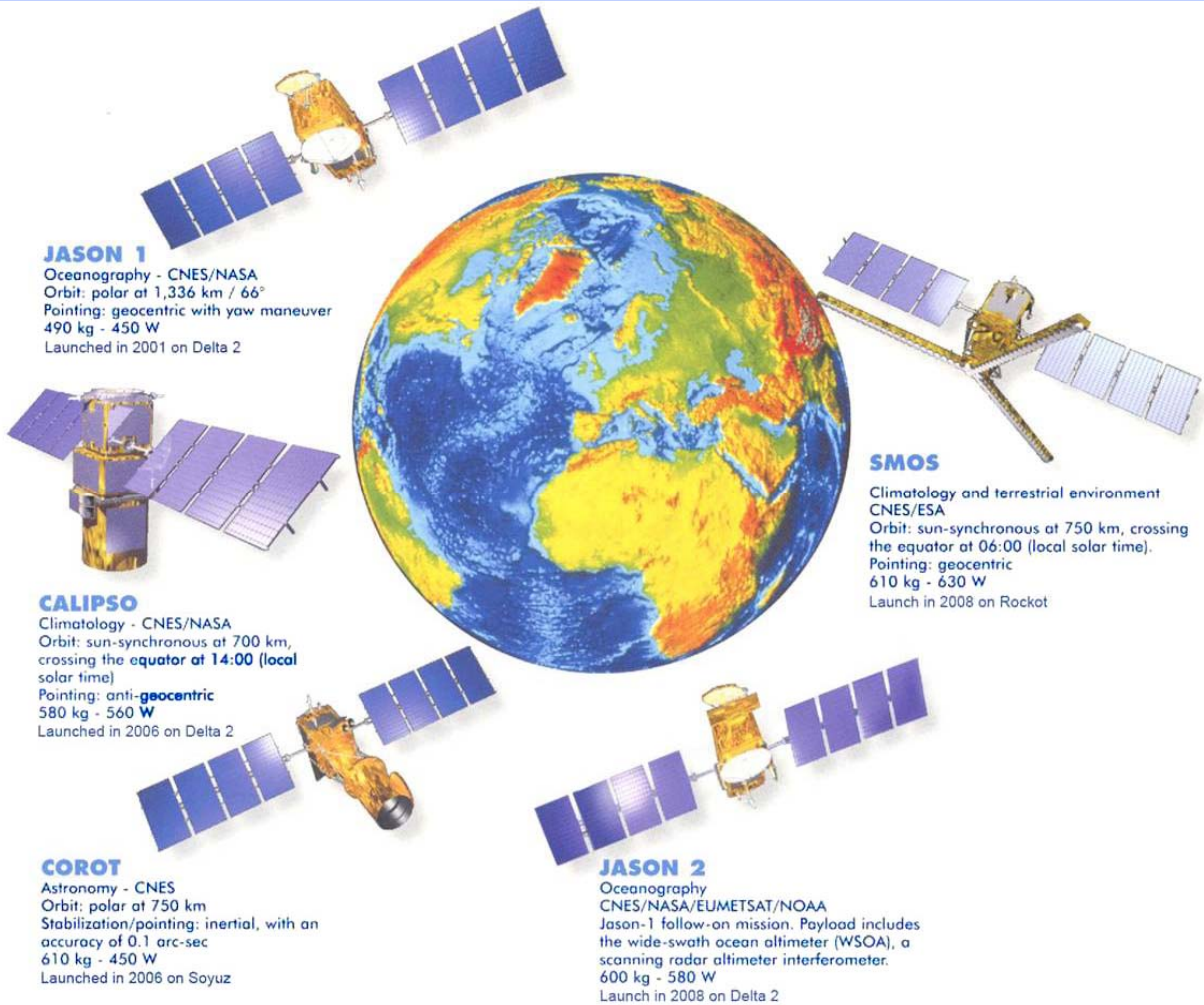
Proteus is designed for use in sun-synchronous, polar and near-equatorial orbits at altitudes from 500 to 1,500 km and for an orbital lifetime of 5 years.

POINTING

Proteus offers precision attitude control (to within 0.05°) with the main instrument package pointing in the earth-center) direction or precision inertial stabilization and attitude control. Attitude can also be programmed to follow a customer-specified pattern.

GROUND SEGMENT

A Proteus control center can be easily integrated with an existing facility using equipment that is both readily available and easy to maintain.



JASON 1

Oceanography - CNES/NASA
 Orbit: polar at 1,336 km / 66°
 Pointing: geocentric with yaw maneuver
 490 kg - 450 W
 Launched in 2001 on Delta 2

SMOS

Climatology and terrestrial environment
 CNES/ESA
 Orbit: sun-synchronous at 750 km, crossing the equator at 06:00 (local solar time).
 Pointing: geocentric
 610 kg - 630 W
 Launch in 2008 on Rocket

CALIPSO

Climatology - CNES/NASA
 Orbit: sun-synchronous at 700 km, crossing the equator at 14:00 (local solar time)
 Pointing: anti-geocentric
 580 kg - 560 W
 Launched in 2006 on Delta 2

JASON 2

Oceanography
 CNES/NASA/EUMETSAT/NOAA
 Jason-1 follow-on mission. Payload includes the wide-swath ocean altimeter (WSOA), a scanning radar altimeter interferometer.
 600 kg - 580 W
 Launch in 2008 on Delta 2

COROT

Astronomy - CNES
 Orbit: polar at 750 km
 Stabilization/pointing: inertial, with an accuracy of 0.1 arc-sec
 610 kg - 450 W
 Launched in 2006 on Soyuz

PROTEUS OFFERS:

- A standardized, reliable and rugged platform,
- Standard payload interface,
- Proven development expertise,
- User's Manual available for mission design.

For more information, contact:
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