

Showcasing the NovaSAR-1 radar satellite

Mission

NovaSAR-1 is a small satellite with a low-cost synthetic aperture radar (SAR) sensor designed to open up new opportunities in remote sensing. The mission is currently under evaluation for acceptance into ESA's Third Party Missions programme

Development

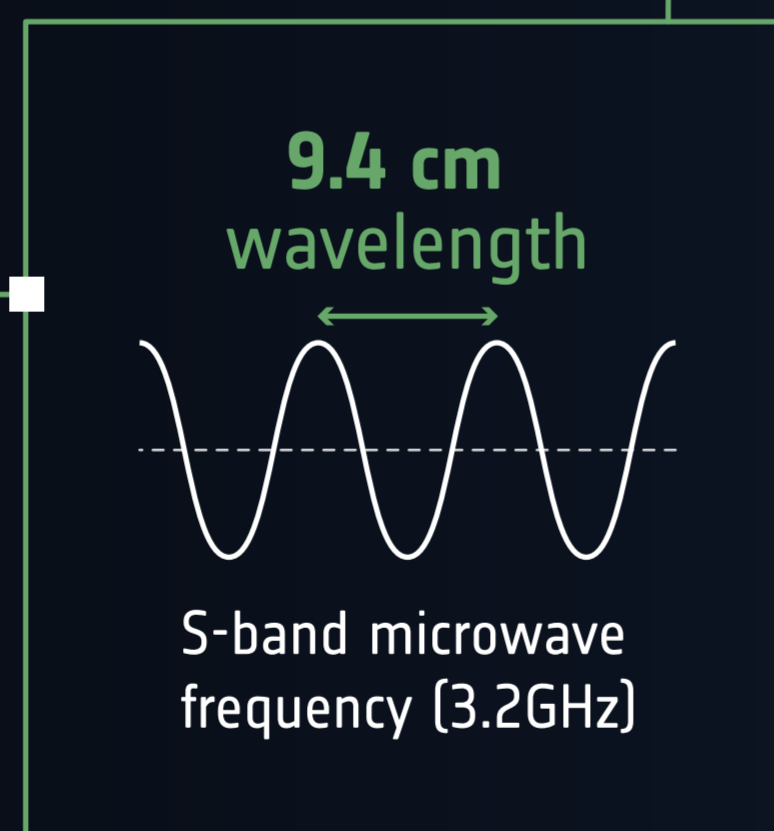
Launched in



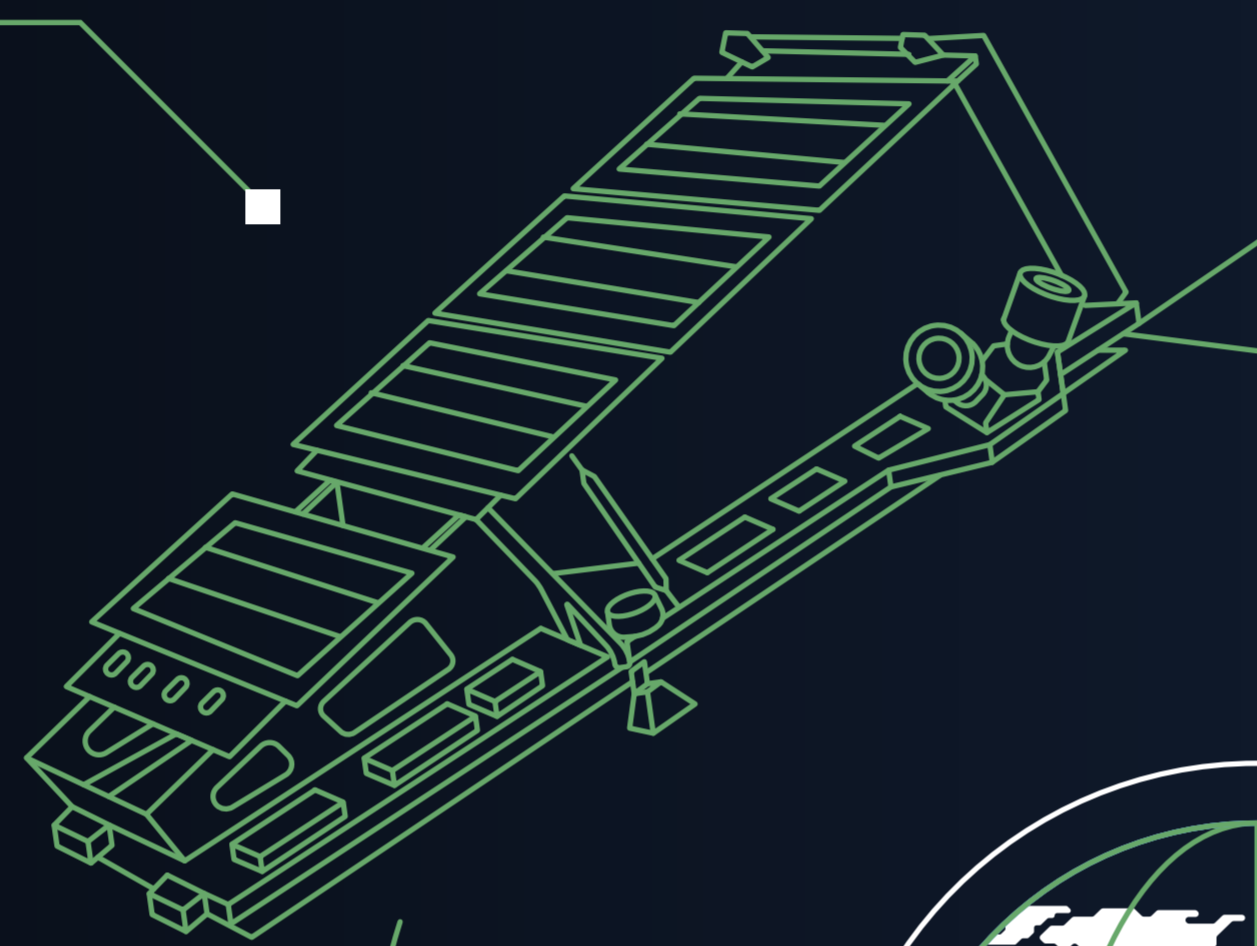
Launched in September 2018, NovaSAR-1 was developed as part of a technology demonstration initiative by Surrey Satellite Technology Ltd (SSTL) and Airbus Defence and Space

Instrument

The SAR sensor on board NovaSAR-1 operates in the S-band microwave frequency (3.2 GHz), corresponding to a 9.4 cm wavelength, which is less common in spaceborne SAR systems than the X-, C- or L-bands. It offers a variety of modes with different resolutions and swath widths



NovaSAR-1



Synergy

NovaSAR-1 and the multispectral Vision-1 mission occupy the same orbit, forming the first dedicated OptiSAR constellation, which enables users to carry out combined analyses using SAR and optical acquisitions over the same location in close succession



Objectives

The mission – which is expected to last seven years – is designed to demonstrate the potential of NovaSAR-1's innovative low-cost SAR sensor to lower the ticket price of SAR remote sensing missions and empower new S-band microwave applications

Applications

NovaSAR-1 data are suitable for a range of uses, including:

- Flood monitoring
- Forestry and agriculture management
- Land cover classifications
- Disaster responses
- Maritime activities

Data access

Users can request access to newly acquired NovaSAR-1 data for research and application development purposes, via an Announcement of Opportunity:

earth.esa.int/eogateway/announcement-of-opportunity/novasar-1