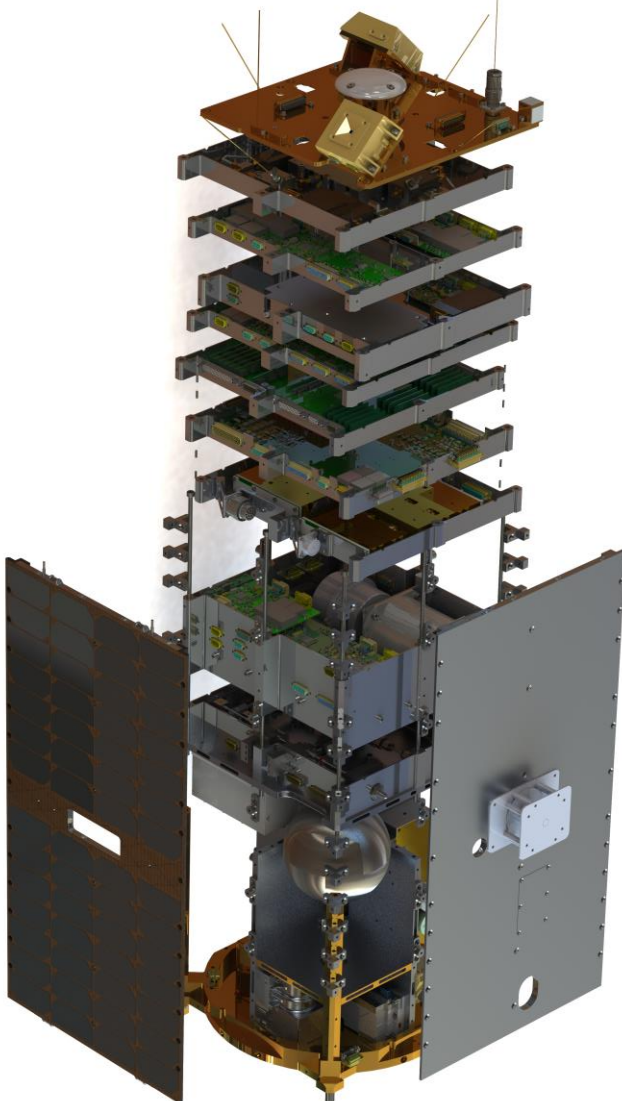


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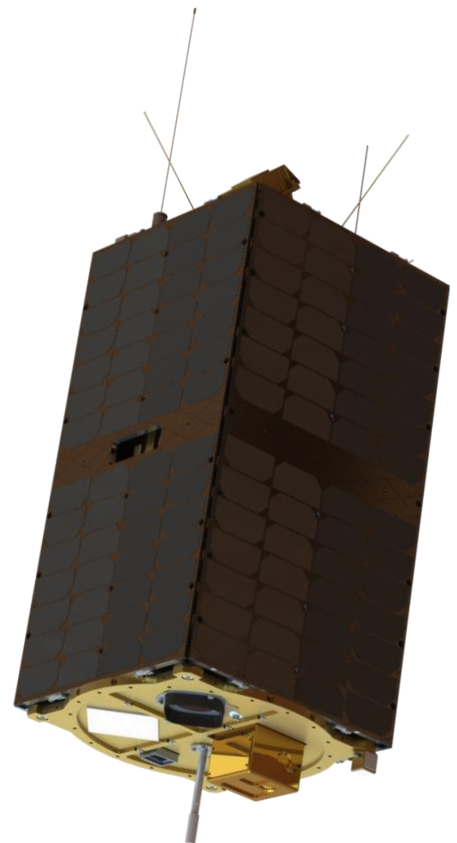
S-50

S-50 Microsatellite Platform is the first satellite bus developed by SITAEEL and it is the smallest bus of the SITAEEL platforms family. The spacecraft is based on two modules, namely the bus module and the payload module, that contain all the subsystems and payloads. In particular, thanks to the heritage of past missions, most of the subsystems and their units are arranged inside aluminum trays in order to provide physical separation, flexibility and reduced MAIT effort. The main bus is physically separated from the payloads and integration can be performed separately. In order to increase the overall system reliability, redundancy is implemented for most subsystems and units.

This platform has already been selected by ESA in 2012 for the European Student Earth Orbiter mission due for launch in 2016, in which 7 different payloads have been installed coming from different universities across Europe.



S-50 Platform exploded view



S-50 Platform

S-50 Technical Data-Sheet

Targeted mission	EO SS0 in LEO @500-550 km
P/L max mass	20 kg
P/L avg power cons.	Up to 15 W (*)
P/L allowable volume	320x320x280 mm ³
S/C launch mass (kg)	<50 kg
S/C envelope LxWxH	340 x 340 x 660 mm ³
S/C power gen.(W)	Up to 26 W Avg (*), 28 W Peak
Battery capacity	Li-Ion, 340 Whr
Pointing accuracy	Up to 0.1° (*), 3-axis stabilization
Pointing knowledge	Up to 0.01° (*)
Delta-V	Up to 5 m/s (*)
TT&C	UHF, 10 kbps
PDHT data rate	S-band, up to 20 Mbps
PDHT data storage	Up to 2 GB
S/C redundancies	Full-cold P/F red.
Lifetime	Up to 3 years

(*): Optional (depending on H/W selection)

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