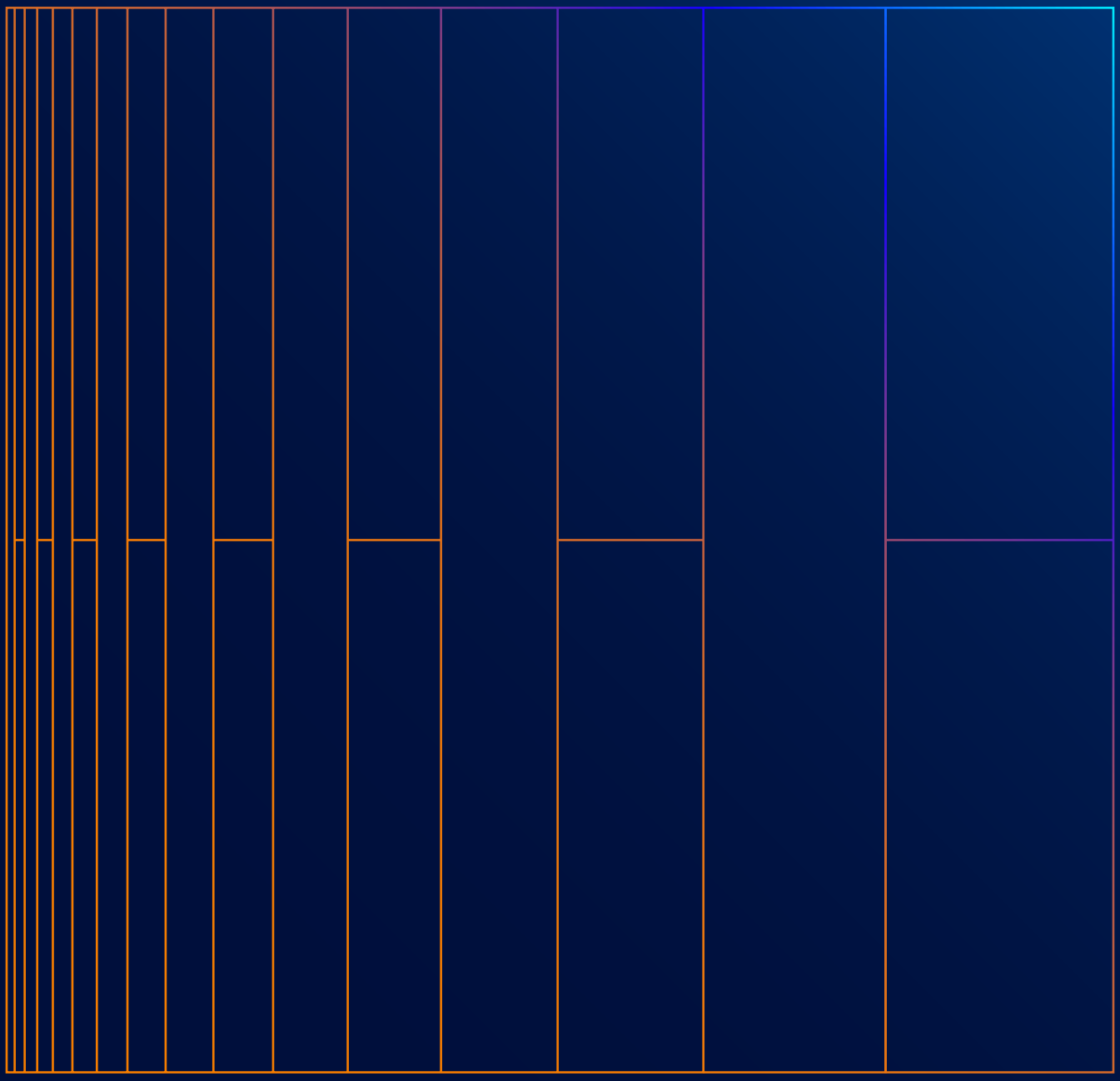


MINI4EO LITE

Reliable innovation
made lighter.

SATELLITE SYSTEMS

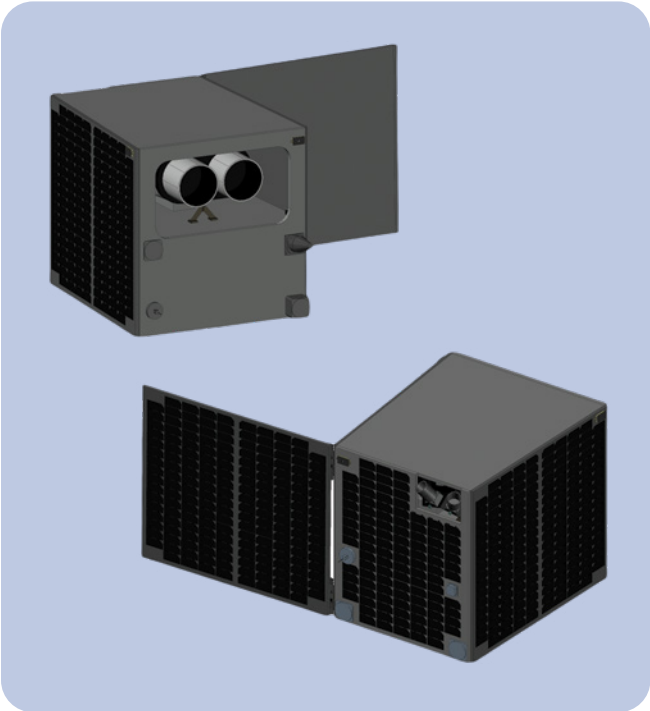
deimos

MINI4EO LITE SPECIFICATIONS

mini4EO-Lite is the compact version of mini4EO without the simultaneous image acquisition/download capability, but maintaining the same performances, mission modes and launchers compatibility.

The platform has been optimized to be in the range of 125kg able to accommodate EO Payload(s) in the range of 25kg.

The result is a lighter platform but still very versatile, enabling the incorporation of large list of elements to improve the satellite performance.



PLATFORM	
Envelope dimensions	91 x 78 x 70 cm
Wet mass	125 kg
Peak power	250W
Max. power generation @ Sun pointing	310W
Battery capacity	960 Wh
Lifetime	> 5 years operational lifetime in LEO orbit
Agility	from -45º to +45º in 180 sec (roll axis)
Mission modes	• Power-off mode • De-Tumbling and Acquisition mode • Housekeeping mode • Scenario mode • Safe Hold mode
Imaging scenarios	• Single Strip Scenario • Multi-Strip Scenario • Stereo Imaging Scenario • Double-Swath Imaging Scenario • Star Imaging Scenario
Launchers compatibility	• VEGA-C RideShare SSMS (Flexi) • FALCON-9 • PSLV

SUBSYTEMS	
Power System	• Solar power input module handling up to 600W @ 90V • 16 x +28V LCLs protected power outputs • 12 x +15V LCLs protected power outputs • 1 x 960 Wh Li-ion battery pack (8S6P) • Body-mounted solar arrays / QJ Solar Cell 4G32C
Structure and Mechanics	• Aluminium honeycomb panels • 381mm (15”) separation system
Command & Management	• Fully cross-strapped dual redundant On-Board Computer • TM/TC compliant to CCSDS format including AES256 encryption • On-Board image processing • PUS Protocol services
Communication system	**Low data rate (TMTC):** • 2 x S-Band Transceiver • RF output power ~ 2W • 2 x Hemi-spherical coverage antenna • CCSDS Compliant **High data rate (image data downlink):** • X-Band Transmitter @ 520 Mbps • RF output power ~10W • Steerable (2-axis) high-gain antenna • CCSDS Compliant **ISL Link:** • iDRS, if rapid tasking and / or low latency required
ADCS System	**Redundant ADCS on-board computer with:** • ADCS SDK software **Sensors suite:** • 4 x MEMS sunsensor • 2 x Magnetometer • 2 x Star Tracker • 2 x Gyros • 2 x GNSS module **Actuators:** • 3-axis Magnetorquer • 4 x Reaction wheel **Performances:** • Pointing Error ≤ 0.06 deg (3σ) across-boresight • Pointing jitter ≤ 0.12 μrad (3σ) in all axis
Propulsion	Cold gas thruster
Thermal control	Primarily passive, plus limited use of heaters

EO PAYLOAD ACCOMMODATION	
Payload volume	310 x 475 x 910 mm
Average payload power consumption	35 W
Payload mass	20 kg (OTA) + 5 kg (Electronics)
Payload interfaces	CAN bus or RS485 (TMTC) / LVDS (Raw data)
Available power buses	+28V, +15V

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