2NDSpace

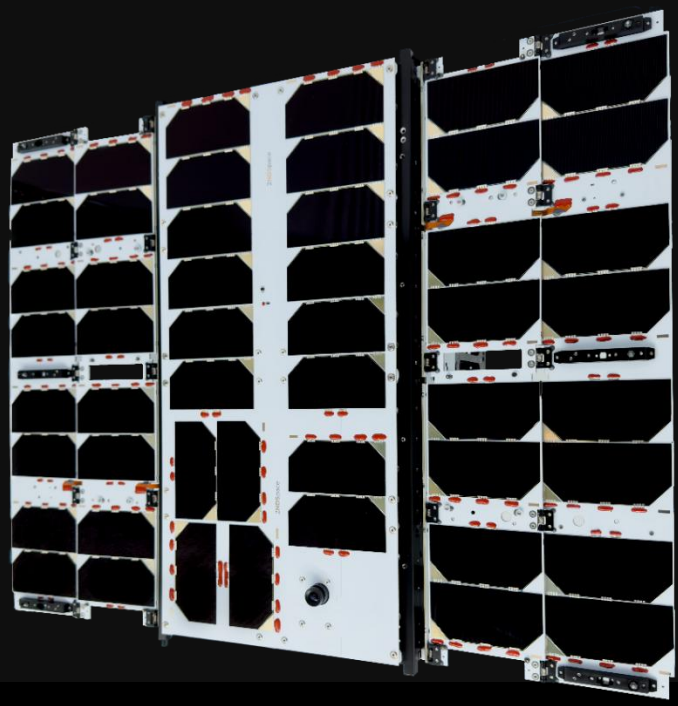
DROP

TRL 9

Deployable Solar Panels

DEPLOYABLE CUBESAT SOLAR PANELS

2NDSpace's deployable solar panels derive from a decade of experience of the team in the design of space systems and successful nanosatellites missions. All 2NDSpace products are conceived to offer excellence combined with customization-as-a-standard approach and reduced lead time.
DROP deployable panels are a TRL9 solution with flight heritage offering high versatility with multiple additional options such configurable deployment angle and strings direction, customizable HDRM voltage and back-string option.



- UTJ >30% efficiency solar cells
- Configurable deployment layout
- Custom interfaces and umbilical connection
- ZERO-Residual dipole design
- Stabilized thermal dissipation architecture
- RBF and embedded magnetorquer
- Dual redundant deployment system
- Qualified for LEO and GEO

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PRODUCT **PORTFOLIO**

	DROP-03	DROP-12	DROP-16	DROP-03X	DROP-04X	DROP-12X	DROP-16X	DROP-03XL	DROP-12XL	DROP-16XL
N° of deployable Elements	1	1	1	2	2	2	2	3	3	3
Back-string Option	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Front Side Peak Power [W]	7,5	20	25	15	20	40	50	22,5	60	75
Body Mounted Option [W]	+8	+20	+25	+8	+10	+20	+25	+8	+20	+25
Back String Option [W]	+8	+20	+25	+8	+10	+20	+25	+8	+20	+25
Total Available Power [W]	22,5	60	75	30	40	80	100	37,5	100	125
Panel Voc [V]	15,6	20,8	26	15,6	20,8	20,8	26	15,6	20,8	15,6
Peak PWR Voltage [V]	14,58	19,44	24,3	14,58	19.94	19,44	24,3	14,58	19,44	24,3
Peak Current [A] *	0,50-1,00	1,0-2,00	1,0-2,00	0,50-1,50	1,00-1,50	2,00-3,00	2,00-3,00	2,00-3,00	2,00-3,00	2,00-3,00
Protection Loss [W]	<0,1	<0,1	<0,1	<0,3	<0,3	<0,3	<0,3	<0,1	<0,3	<0,3

QUALIFICATION AND **ACCEPTANCE TEST**

	Functional/AIT	Electrical control	Vibration test	Mechanical Shock	TVAC Test
Qualification Test	✓	✓	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C
Acceptance Test	✓	✓			

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FLIGHT HERITAGE

- **Customizable Deployment Angle** – Adaptable to mission-specific requirements for optimal power generation.
- **Configurable Panel Layout at Sun-Pointing** – Adjustable configuration to maximize energy capture based on user satellite orientation.
- **Backstring** Option for Safety – Additional safety mechanism to ensure secure panel deployment.
- **Dual Redundancy** in Deployment System – Enhanced reliability with backup mechanisms to prevent deployment failures.
- Deployment Feedback System – Real-time monitoring and confirmation of successful panel deployment.
- Standard Configuration with up to **3 Wings** – Scalable design with the possibility of adding extra deployable

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