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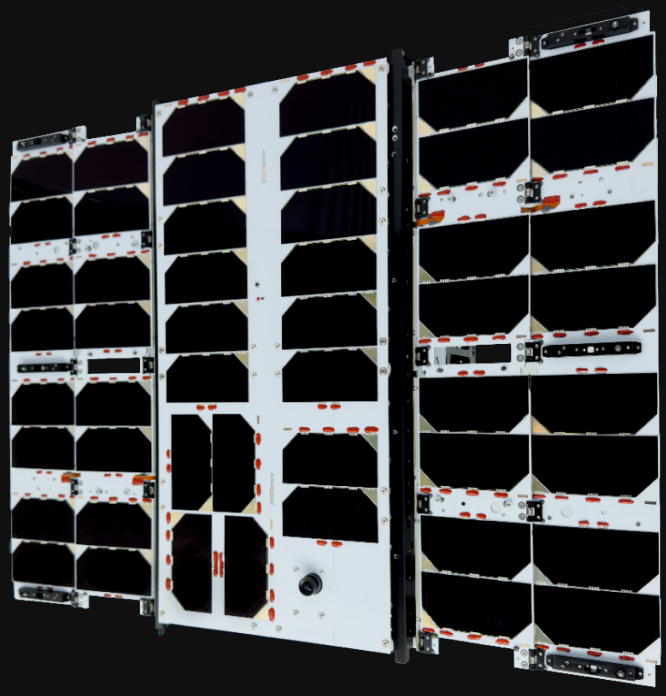
DROP

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.



- Triple junction solar cells, >30% efficiency
- 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-08	DROP-12	DROP-16	DROP-03X	DROP-08X	DROP-12X	DROP-16X	DROP-03XL	DROP-08XL	DROP-12XL	DROP-16XL
N° of deployable Elements	1	1	1	1	2	2	2	2	3	3	3	3
Back-string Option	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Suggested for	3U/6U	4U/8U	6U/12U	8U/16U	3U/6U	4U/8U	6U/12U	8U/16U	3U/6U	4U/8U	6U/12U	8U/16U
Mass [g]	219	292	522	723	331.5	462	785	1190	445	588	998	1497
Front Side Peak Power [W]	7.10	9.53	19.06	23.92	14.19	19.06	38.12	47.85	21.29	28.59	57.18	71.77
Body Mounted Option [W]	+7.10	+9.53	+19.06	+23.92	+7.10	+9.53	+19.06	+23.92	+7.10	+9.53	+19.06	+23.92
Back String Option [W]	+7.10	+9.53	+19.06	+23.92	+7.10	+9.53	+19.06	+23.92	+7.10	+9.53	+19.06	+23.92
Total Available Power [W]	21.29	28.59	57.18	71.77	28.39	38.12	76.24	95.70	35.49	47.65	95.30	119.62
Peak Platform Power [W] **	22.47	42.88	65.02	71.77	37.46	61.94	103.14	119.62	51.65	81.00	141.16	167.47
Panel Voc [V]	16.44	21.92	21.92/43.84	27.4	16.44	21.92	21.92/43.84	27.4	16.44	21.92	21.92/43.84	27.4
Peak PWR Voltage [V]	14.18	19.04	19.04/38.48	23.9	14.18	19.04	19.04/38.48	23.9	14.18	19.04	19.04/38.48	23.9
Peak Current [A] *	0.50-1.00	0.50-1.00	1.00-2.00	1.00-2.00	0.50-1.50	1.00-1.50	2.00-3.00	2.00-3.00	1.50-2.50	1.50-2.50	2.00-3.00	2.00-3.00
Deployment Angle	90° / 135°											
HDRM Voltage [V]	3.3 / 5 / 12 / custom											

**Depending on string connection*
**Estimated for an example layout with body mounted panel or strings (see the DROP ICD)*

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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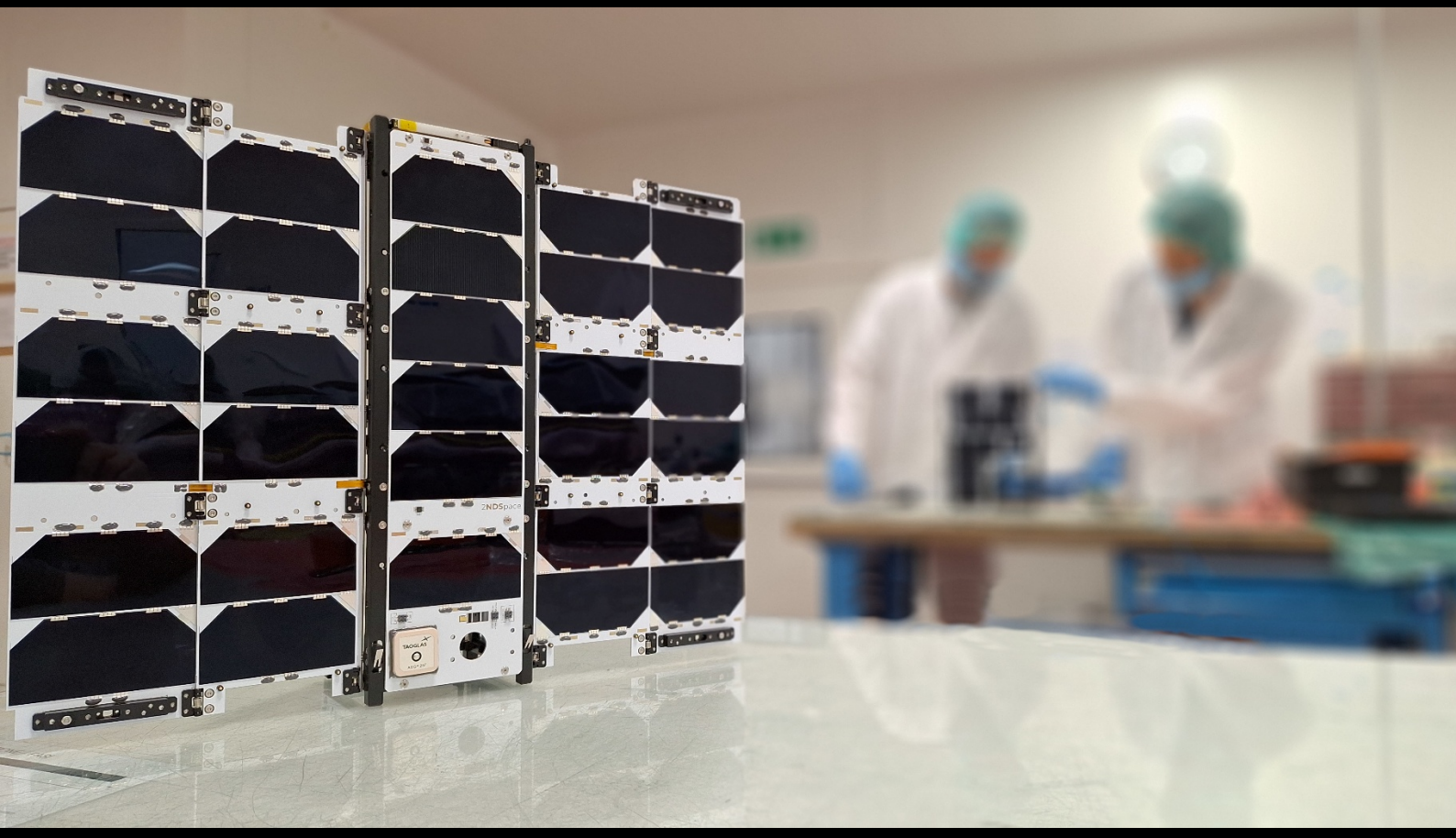
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FLIGHT HERITAGE

- 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.
- Back-string Option – Additional photovoltaic string on the rear side of the deployable panels, generating power also when stowed and in off-pointing attitudes.
- 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 elements for higher power output.





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