

sparkwing

your go-to partner for smallsat solar arrays

smallsat solar arrays

our approach



choose your configuration, get all the information you need and place your order



track and trace the progress of the manufacturing process



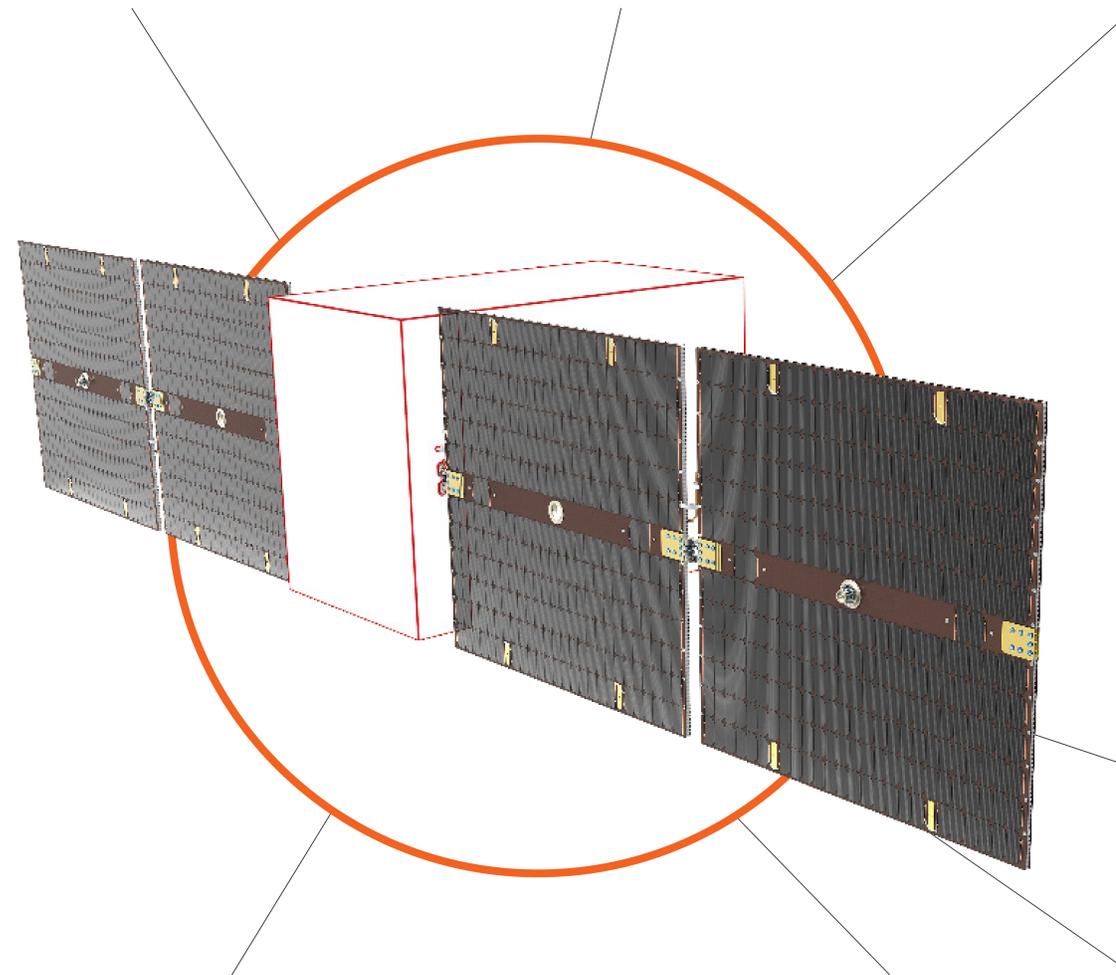
plug the solar array to your spacecraft and get ready for launch

main features

- optimised for LEO operations
- 5 years of operation
- easy integration
- single hinge at root to allow coupling with SADA
- low stack height
- set of standardized dimensions

hinges

- use of heritage hinge design
- in-plane and torsionally stiff to allow single hinge/ hingeline
- adjustable spring energy
- root hinge allows multiple deployment angles
- root hinge position allows for a low tolerance interface position



general specifications

number of panels	1 - 3 deployable panels per wing
stackheight	37 mm for 1 panel config. 62mm for 2 panel config. 89mm for 3 panel config. (from sidewall S/C, local protrusion at HD location.)
power	~285W/m ² (pmp) BoL at 25° C ~250W/m ² (pmp) BoL at 80° C exact power dependent on size
electrical I/F	Sub-D connector
frequencies	stowed: ≥100 Hz for small sizes ≥80 Hz large sizes deployed: ≥2 Hz for small sizes ≥1 Hz for large sizes
mass	can be estimated by adding: panels + PVA: 3,8kg/m ² mechanisms: 0,4kg/panel
loads	up to 25kg quasi static design load up to 13grms random vibration
wing configuration	1 central hold-down per wing
roothinge deployment angle	90° other angles upon request
operational lifetime	up to 5 years extension can be discussed
orbit height	optimized for 600-1500km LEO

order your solar array



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find us
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panel dimensions

19 cell / string design, 36V PVA

width of panel (B)	440	600	750	1000	1160
length of panel (L)	700 (3 strings)	700 (5 strings)			
(All dimensions are in mm)	800 (4 strings)	800 (6 strings)	800 (8 strings)	800 (10 strings)	800 (12 strings)
		965 (7 strings)	965 (9 strings)	965 (12 strings)	
			1100 (11 strings)	1100 (14 strings)	1100 (16 strings)

26 cell / string design, 50V PVA

width of panel (B)	600	750	910	1070	1230
length of panel (L)	570 (3 strings)	570 (4 strings)	570 (5 strings)	570 (6 strings)	570 (7 strings)
(All dimensions are in mm)	800 (4 strings)	800 (5 strings)	800 (7 strings)	800 (8 strings)	800 (9 strings)
	965 (5 strings)	965 (7 strings)	965 (8 strings)	965 (10 strings)	965 (11 strings)
	1100 (6 strings)	1100 (8 strings)	1100 (10 strings)	1100 (12 strings)	1100 (14 strings)

hold-down and release

- use of COTS release actuator
- low stack height
- designed for single HD configuration



substrates

- use of heritage CFRP technology
- sandwich panel design
- use of M55J fibers
- ATOX protection on request

