

Sparkwing

Space made easy

The plug and play solution to power your small satellite

Sparkwing is the world's first commercially available off-the-shelf solar array for small satellites. It is optimized for LEO missions requiring power levels between 100W and 2000W, and bus voltages of 36V or 50V. We offer more than twenty different panel dimensions, which can be configured into deployable wings with one, two or three panels per wing.

3 easy steps:



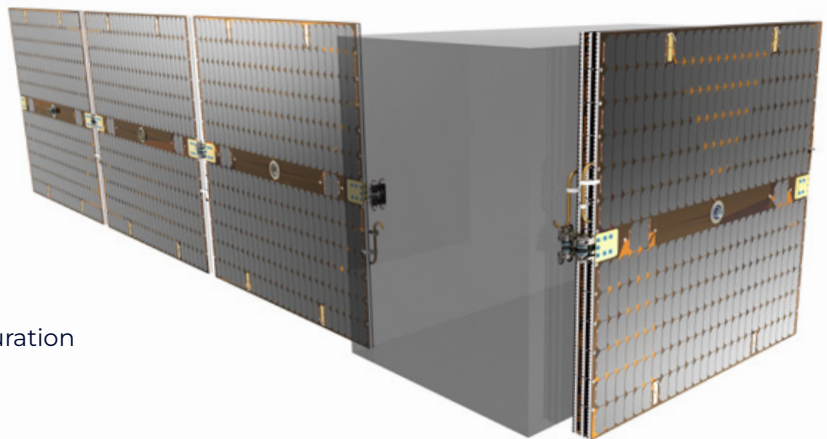
Choose your configuration from our catalogue.



Track manufacturing and delivery.



Plug the solar array to your spacecraft and get ready for launch.

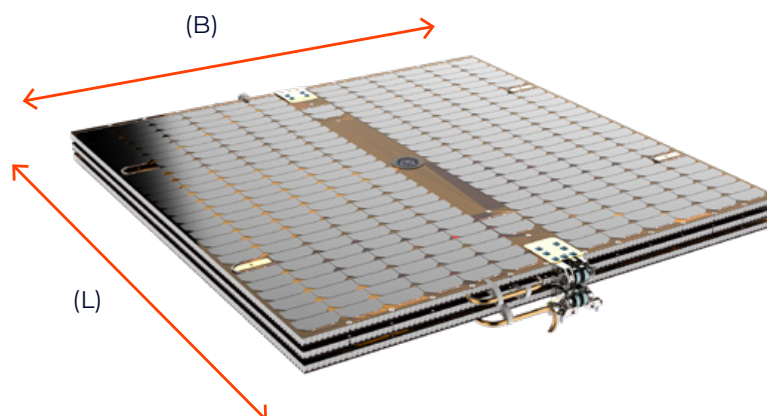


What do you get?

- ✓ A reliable solution that is built on decades of expertise and experience.
- ✓ Assured quality for an attractive price with a short lead time.
- ✓ A ready to launch product, with easy ordering and easy integration with your spacecraft.

General specifications

Number of Panels	1-3 panels per wing or body mounted	Temperature Envelope	Operational: -108°C / +112°C Survival: -172°C / +157°C
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.)	Mass	$N_{\text{panel}} * (3.41 \text{ kg/m}^2 * A_{\text{panel}} + 0.65 \text{ kg}) + 0.4 \text{ kg}$
Cells	AZUR 3G30A solar cells	Loads	$\geq 25\text{g}$ quasi static design load $\geq 15\text{grms}$ random vibration
Electrical I/F	Sub-D connector	Wing Configuration	CFRP honeycomb panel Central Hold down 4 Snubbers Single root hinge and inter-panel hinges
Maximum Current	1.7 A – 4.0 A per section depending on configuration	Root Hinge Deployment Angle	30°, 85 °, 90 ° and 180° other angles upon request
Maximum Open Circuit Voltage	36V configuration: 67.3 V 50V configuration: 92.2 V	Operational Lifetime	Guaranteed for 5 years
Stowed Frequencies	$\geq 100 \text{ Hz}$ for small sizes $\geq 80 \text{ Hz}$ for large sizes (dependent on snubber placement)	Orbit height	LEO GEO verification ongoing
Deployed Frequencies	1 panel: 4.5 – 14.5 Hz 2 panels: 1.4 – 5.0 Hz 3 panels: 0.6 – 3.5 Hz	Lead time	9 to 12 months from order



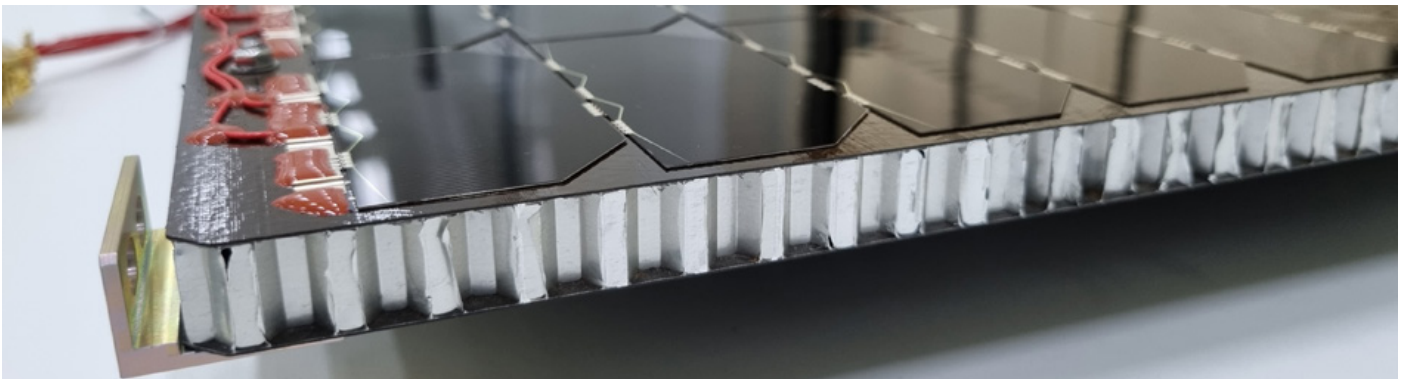
Download 3D CAD models at www.sparkwing.space.
For models of other panel dimensions please contact us.

Panel dimensions

36V PVA design

Wattages are BOL@28C, incidence angle of 0deg.
Values for 1 panel, multiply as needed for multi-panel wing

	Width of panel (B) in mm	600	750	910	1000	1070
Length of panel (L) in mm	570	88W				176W
	700	111 W				
	820	133 W	177 W	221 W		265 W
	965	155 W	199 W	265 W		
	1100		243 W		309 W	



50V PVA design

Wattages are BOL@28C, incidence angle of 0deg.
Values for 1 panel, multiply as needed for multi-panel wing

	Width of panel (B) in mm	600	750	910	1070	1230
Length of panel (L) in mm	570	92 W	122 W	153 W	183 W	214 W
	800	122 W	153 W	214 W	244 W	275 W
	965	153 W	214 W	244 W	305 W	
	1100	183 W	244 W	305 W	366 W	



Order your solar array

Technical questions



Contact Sjahdian
sjahdian.siregar@airbus.com

Call us
+31 71 52 45 775

Contact Niels
niels.van.der.pas@airbus.com



Find us
www.sparkwing.space