



Intelligent
Energy®



Data sheet

IE-Soar™ 2.4kW

Lightweight fuel cell power module for UAVs and other portable applications

Intelligent Energy® is a fuel cell engineering company focused on the development and commercialisation of its PEM fuel cell technologies for a range of markets including automotive, stationary power and UAVs. We are headquartered in the UK, with additional offices and representation in the US, Japan, South Korea and China.

IE-Soar™ 2.4kW is our latest product for UAVs and has the highest output in the range.

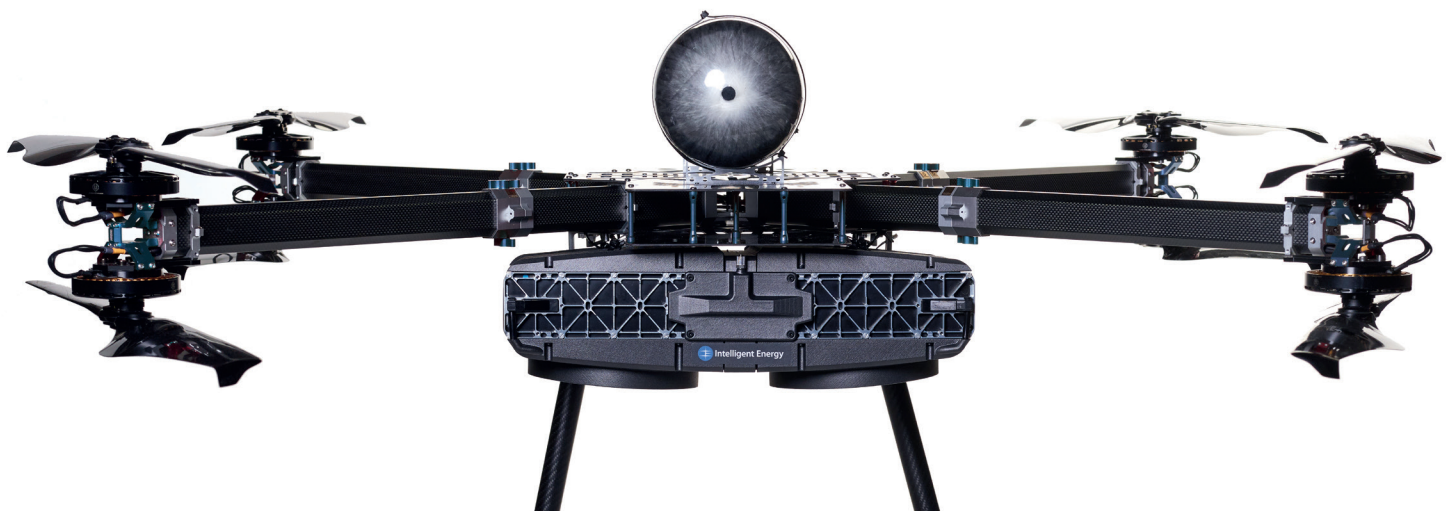
The IE-Soar™ 2.4kW is modular which means two modules can be connected in parallel to give an output of 4.8kW. No additional hardware is needed to do this.

Intelligent Energy provides a unique solution to extend flight times of UAVs presently constrained by the limitations of batteries.

Flight durations of over three times that provided by batteries have been achieved and fuel cells provide a natural solution for manufacturers moving to larger UAVs and heavier payloads.

Intelligent Energy's air cooled fuel cell systems run on hydrogen and ambient air to produce clean DC power in a simple, cost-effective, robust and lightweight package. They have a higher energy to mass ratio than battery based systems and can be refuelled in a few minutes.

Please contact us for availability and pricing.





IE-Soar™ 2.4kW specifications

Maximum continuous power	2400W			
Peak power	Up to 8000W			
Output voltage (DCDC regulated)	Configurable between 50V and 70V			
Fuel Cell Power Module (FCPM)	Dimensions	128 × 442 × 233mm		
	Mass	4800g		
Hydrogen Regulator	Mass	250g		
	Maximum regulator (cylinder) pressure	350 bar/5000 psi		
	Output pressure	0.9 bar.g ± 0.1 bar.g / 13 psig ± 1.5 psig		
	Maximum cylinder mass	10kg		
Default Hybrid batteries (Configurable for higher or longer peak power)	Configuration	2 × 6S in series		
	Dimensions (per battery)	135 × 40 × 40mm		
	Mass (per battery)	535g		
	Capacity (per battery)	3300mAh		
	Peak power	4800W		
Environmental operating conditions	Startup temperature	5°C to 40°C		
	Operating temperature	-5°C to 40°C		
	Maximum altitude*	5000m		
	Storage temperature	-10°C to 70°C		
	System warranty	1000 hours		
Safety features	Dual redundant power system and backup battery			
	Certification of IE-Soar™ 2.4kW	CE and FCC		
Other features	Internal data storage for firmware update, performance and diagnostics	SD card		
	Communication protocol to UAV or accessories	UART / CAN		
	Output electrical connector	Ring Terminal / AS150		
Example Integration	UAV	DJI M600 PRO	Gryphon HX-1600	Gryphon XQ-1400 VS
	Flight time (no payload)	70 minutes	120 minutes	120 minutes
	Flight time (max. payload)	40 minutes (3kg payload)	80 minutes (5.2kg payload)	60 minutes (4.5kg payload)

* It may be possible to widen this range depending on customer power requirements.

For more information about our products visit our website: www.intelligent-energy.com

To find out how you could benefit from longer flight times, arrange a meeting with a sales representative in your region by emailing: sales@intelligent-energy.com