

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 $^{\mathbb{M}}$ 2.4kW is our latest product for UAVs and has the highest output in the range.

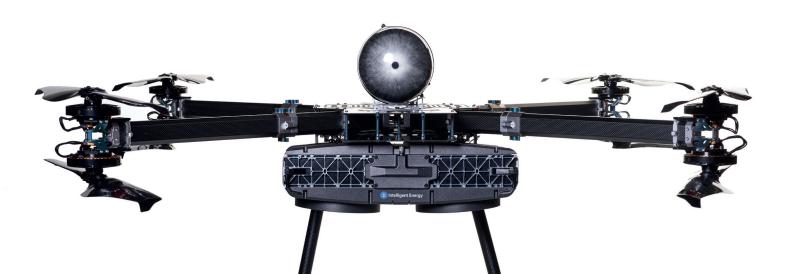
The IE-Soar™ 2.4kW is modular which means two modules can be connected in parallel to give an output of 4.8kW. No additional hardware is needed to do this.

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)			Con	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.	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 se			2 × 6S in series	
	Dimensions (per battery)			135 × 40 × 40mm	
	Mass (per battery) 53				
	Capacity (per battery) 3300mAl				
	Peak power 4800				
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**

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