



Intelligent
Energy®



Data sheet

IE-Soar™ 1.2kW

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.

The IE-Soar™ 1.2 is of a modular design which means two modules can be connected in parallel to give an output of 2.4kW. 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™ 1.2kW specifications

Maximum continuous power	1200W
Peak power	Up to 8000W
Output voltage (DCDC regulated)	Configurable between 50V and 70V
Fuel Cell Power Module	
Dimensions	128 × 246 × 233mm
Mass	2600g
Hydrogen regulator	
Mass	250g
Maximum regulator (cylinder) pressure	350 bar/5000 psi
Output pressure	0.5 bar ± 0.25 bar/7 psi ± 3 psi
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™ 1.2kW	CE and FCC certified
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

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