



Powering the hydrogen future™ with our outstanding fuel cells and service.

IE-SOAR 800W second generation

IE-SOAR™ fuel cell power modules directly replace batteries and give much longer flight times.

Enable previously impossible applications – your business is no longer constrained by flight time.

Unlock BVLOS operations – BVLOS makes sense with the range provided by fuel cells.

Increase operational efficiency – spend more time in the air and achieve more.

Lower cost per flight hour – at volume fuel cells are cheaper than batteries.

Technical benefits

- Designed for safety and reliability: single point failure tolerant and built in power system redundancy.
- Combine systems in parallel for 1600W output.
- Direct battery replacement: 6S to 12S compatible – automatically follows load demand just like a battery.
- Modular design: separate control and fuel cell for more flexible integration into fuselage.
- Range extender and battery management versions available.
- Low noise signature and zero-emissions.
- Targeted at VTOL and fixed wing integrations.
- Based on architecture of Intelligent Energy's proven 2.4kW product.
- 1000 hour commercial warranty.

Fuel cells vs. internal combustion engines

- Clean & zero-emission
- Near silent operation
- Reduced maintenance. No moving parts. No tuning.
- Vibration free for maximum stability

Fuel cells vs. batteries

- Increased flight time
- Fast refueling
- Built in power system redundancy

IE-SOAR™ 800W second generation specifications

Maximum continuous power	800W			
Peak power	7500W - hybrid battery dependent			
Output voltage (DCDC regulated)	Configurable between 24V and 48V			
Fuel Cell Power Module (FCPM)	Dimensions (Fuel cell)	210 x 105 x 105mm		
	Dimensions (control box)	195 x 90 x 40mm		
	Mass	1450g		
Hydrogen Regulator	Mass	315g		
	Maximum regulator (cylinder) pressure	350 bar/5000 psi		
	Output pressure	0.9 bar ± 0.1 / 13 psi ± 1.5 psi		
	Maximum cylinder mass	10kg		
Environmental operating conditions	Startup temperature	5°C to 40°C		
	Operating temperature	-5°C to 40°C		
	Maximum altitude*	3000m		
	Storage temperature	-10°C to 70°C		
	System warranty	1000 hours		
Safety features	Dual redundant power system and backup battery			
	Certification of IE-SOAR™ 800W	CE and FCC		
Other features	Internal data storage for firmware update, performance and diagnostics	SD card		
	Communication protocol to UAV or accessories	UART / CAN		
Example Integration at 400W		Cylinder	System Mass	Flight Time
	TPED/DOT Certified	3.0L	4kg	2.6 hours
		4.8L	4.9kg	4.0 hours
		6.8L	5.3kg	5.9 hours
	Specialist	3.5L	3.7kg	3.4 hours
		5.0L	3.9kg	4.9 hours
		9.0L	4.9kg	8.8 hours
	Best performing custom	16.0L	7.4kg	15.6 hours

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



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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