

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 <sup>*</sup>			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 custon	16.0L	7.4kg	15.6 hours

<sup>\*</sup> 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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