IE-SOAR™

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.

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™

IE-SOAR™ 800W second generation specifications*

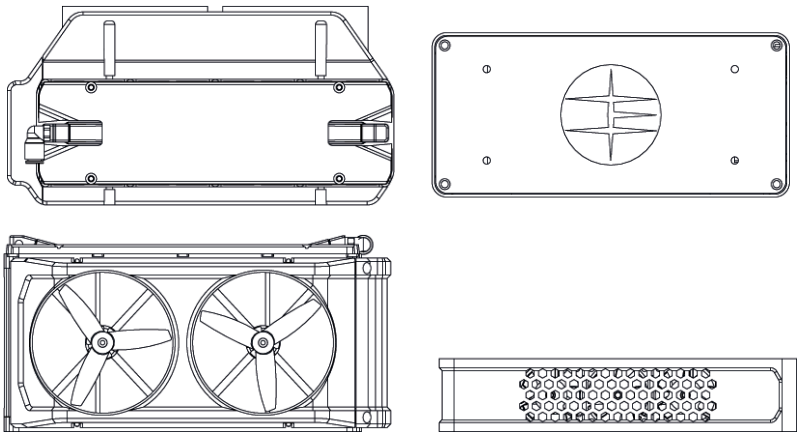
Maximum continuous power		800W
Peak power in default configuration		2400W at 24V or 4800W at 48V**
Output voltage (DCDC regulated)		Configurable between 24V and 48V
Fuel Cell Power Module (FCPM)	Dimensions (Fuel cell)	210 x 105 x 105mm
	Dimensions (control box)	195 x 90 x 40mm
	Mass	1500g
Hydrogen Regulator	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	
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

* Subject to change

** Higher peak power configuration available if required.

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



+44 (0) 1509 271 271
sales@intelligent-energy.com
intelligent-energy.com

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**

 Published by: Intelligent Energy Ltd, Charnwood Building, Holywell Park, Ashby Road, Loughborough LE11 3GB (Registered in England with company number: 03958217). Printed May 2023. All information correct at time of going to print. 70328-IE-DS-202203