

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

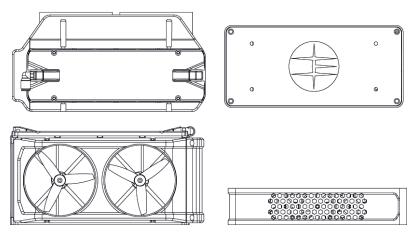


## IE-SOAR™ 800W second generation specifications\*

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			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	Startup temperature			5°C to 40°C
conditions	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 custon	16.0L	7.4kg	15.6 hours

<sup>\*</sup> Subject to change

<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** 

© Intelligent Energy Limited 2024. The Intelligent Energy name, logo, and other trade brands/names referenced herein are trademarks or registered trademarks of Intelligent Energy Ltd or its group companies, whether or not they are used with trademark symbol "TM" or "\*\*".

Disclaimer: The information contained in this publication is intended only as a guide and is subject to change as a result of the constant evolution of Intelligent Energy's business and its technology. This publication and its contents (i) are not defin titive or contractually binding; (ii) do not include all details which may be relevant to particular circumstances; and (iii) should not be regarded as being a complete source of information. To the fullest extent permitted by law, Intelligent Energy offers no warranty as to the accuracy of the content of this publication, shall not be liable for the content of this publication and no element of this publication shall form the basis of any contractual relationship with a third party or be used by any third party as the basis for its decision to enter into a contractual relationship with Intelligent Energy, Published by: Intelligent Energy, Ludy, 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

<sup>\*\*</sup> Higher peak power configuration available if required.