

# Cranfield Aerospace Solutions' pipeline reaches over 1300 hydrogen fuel cell powerplants as it secures letter of intent from Dronamics, the world's first cargo drone airline

Thursday 12 October, 2023

Cranfield Aerospace Solutions (CAeS) and Dronamics have signed an MoU to further progress the application of the CAeS hydrogen fuel cell (HFC) propulsion system to the Dronamics Black Swan cargo drone aircraft. This agreement confirms the position of CAeS as the preferred supplier of hydrogen fuel cell (HFC) propulsion systems to Dronamics and includes an LOI to supply a substantial number of propulsion systems from 2026, bringing CAeS's total pipeline to over 1300 drivetrains.

The two companies have been working together since November 2022, under an earlier MOU, on a feasibility study for the application of CAeS's HFC technology into Dronamics' flagship Black Swan cargo drone aircraft, which is capable of carrying 350kg for up to 2,500km.

The successful feasibility study has concluded that the CAeS HFC system is well suited to meet the required payload, cargo volume and range for the Black Swan aircraft. As a result, CAeS will develop an STC equivalent modification pack for the Black Swan to convert existing conventionally powered versions of the aircraft to a zero emissions HFC variant in accordance with CS23 aircraft design standards.

The resultant HFC propulsion system is a half-scale version of the 250kW system being developed under Project Fresson (the conversion of the 9-seat Britten-Norman Islander aircraft to hydrogen fuel cell propulsion), validating the ability of the CAeS HFC technology to be adapted to different platform requirements.

This agreement with Dronamics provides a further route to market for the modular HFCS propulsion system technology being developed by CAeS and will provide Dronamics customers with zero-emissions cargo drone freight.

## Chief Executive Officer of CAeS, Paul Hutton, said:

"The selection as preferred supplier of hydrogen fuel-cell powerplants for the Dronamics Black Swan fleet is testament to the exceptional technology that our team has developed and also to our aircraft integration design capabilities. We have now demonstrated that we can adapt and integrate our modular hydrogen propulsion technology into different platforms, opening up much wider market opportunities to exploit further the CAeS gaseous HFC aircraft propulsion systems from 2026."

## Chief Executive Officer of Dronamics, Svilen Rangelov, said:

"We are very excited to be working with CAeS on the adoption of hydrogen fuel-cell technology for our aircraft, having successfully completed the feasibility study. The prospect of running flights with their emissions-free propulsion system helps further solidify our position as a frontrunner in the cargo drone market."

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## About Cranfield Aerospace Solutions:

CAeS is a UK-based aviation pioneer which is developing world-leading hydrogen propulsion system technology for aircraft, with the aim to deliver the world's first, zero-emissions passenger aircraft solution by 2026 with the conversion to the Britten Norman Islander. Through the development of a modular architecture and proven integration capabilities, the company is able to adapt the technology for use on multiple platforms, driving the transition of the aviation industry to zero-emissions flight.

For more information contact Annie Stone via [R.stone@cranfieldaerospace.com](mailto:R.stone@cranfieldaerospace.com) or visit [www.cranfieldaerospace.com](http://www.cranfieldaerospace.com).

**About DRONAMICS:** About Dronamics: Dronamics is the world's first cargo drone airline. It's a leading developer and operator of large, long-range drones built specifically for cargo, its flagship Black Swan

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aircraft will carry up to 350 kg (770 lb) at a distance of up to 2,500 km (1,550 mi) which is estimated to be up to 80% faster, 50% cheaper and with up to 60% lower emissions than alternative modes of transport, including airfreight.<sup>2</sup> Its technology enables same-day shipping over long distances for a variety of industries: from pharma to food, from e-commerce, mail and parcels, to spare parts. The company's fast-growing team includes some of the most experienced aerospace, logistics and technology experts. Dronamics is Europe's first licensed cargo drone airline and IATA's first Strategic Partner for drones worldwide.

Dronamics is co-funded by the European Union under the prestigious European Innovation Council, Europe's flagship innovation program.

For more information, contact [press@dronamics.com](mailto:press@dronamics.com) or visit our Media Area at <https://www.dronamics.com/media>.

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