

ePropelled Announces the First Hybrid Power Systems for UAVs on the Market

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LOWELL, Mass., May 4, 2021 /PRNewswire/ -- ePropelled, the Massachusetts-based technology company offering leading-edge electromagnetic systems, unveils today the first hybrid capable electrical power systems for UAVs and other aviation applications. The ePropelled *Hybrid Ready* TM UAV product line is a family of components that work with internal combustion engines to provide electrical power to the aircraft.

The **ePropelled Hybrid Ready™** Electrical Power System family includes Starter-Generators (SGs), Intelligent Power Systems (also known as power management units or PMUs), Electronic Engine Starters (EES) and DC-DC converters. These modular components can be mixed and matched to supply from 500 watts to 12 kW power. The power systems offer UAV designers the unique option to add hybrid technology to optimize engine size by using the battery for power assist on take-off, range extension or emergency landings. This allows customers to use a smaller engine for situations that demand high power such as take-off.

Two things make Hybrid ReadyTM possible. First, our starter-generators have enough torque to start the engine in addition to supplying power (like an alternator or propulsion motor) during flight. Second the design of our Electronic Engine Starter (EES) allows for this dual operation to use battery power to both start the engine and add power for propulsion. Keeping weight and

cost low while extending flight time are important. In addition, the EES eliminates the need for an external starter which allows the aircraft to be self-contained in the field.

"ePropelled is the first vendor to introduce hybrid power assist capability using Power Systems. Our customers have told us that enhancing their aircraft capabilities is critical to the success of their programs. Hybrid ReadyTM tells our industry that we are ready for business," said Nabeel Shirazee, CTO of ePropelled. "ePropelled is one of the few vendors to provide both electric power and Power Systems for the commercial, security and defense markets. These applications usually have more demanding requirements that other sectors, especially their higher power requirements. Moreover, we take a systems approach to product design, therefore it was logical for us to innovate. We see a lot of synergy between all of our power products and there is a lot more to come."

Power Systems are critical to the success of ever-changing and complicated UAV mission profiles. Considering how Power Systems and propulsion can work together during the design can contribute to lighter and more efficient aircrafts. Built-in software enables the operator to receive real time data monitoring, device information, connection status, event-based alerts, engine starter functionality, and acknowledgement of transmitted messages. For example, critical information can alert the pilot to low fuel and other device emergencies allowing them to land the aircraft safely.

About ePropelled:

ePropelled is a leader in magnetics engineering, innovations that define the future of electric propulsion. Our patented intelligent motors, generators, and motor controllers are software controlled and create new levels of system and energy efficiencies in aerospace, electric vehicles, and industrial applications.

For more information, please visit www.ePropelled.com.

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