Parachute Safety Systems and VTOL: A Partnership Unlocking Commercial Applications from Mapping to Mobility

KIRYAT ONO, ISRAEL, December 12, 2021 /EINPresswire.com/ -- Unmanned Vertical Take Off and Landing (VTOL) aircraft represent a huge market: researchers estimate the sector to be worth more than $15 billion USD by 2027. VTOL drones offer unique benefits for commercial uses, whether smaller VTOL aircraft for agricultural, inspection and delivery applications, or larger aircraft designed for cargo or passenger transport. VTOLs takeoff vertically, requiring little horizontal space – and then transition from vertical to horizontal flight, providing the speed and flight endurance required for cargo delivery, transport, and more. At their destination, VTOL systems can land safely and accurately, protecting payloads and opening the possibility of landing on moving targets like ships.

ParaZero SafeAir VTOL

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Unmanned VTOLs are opening new opportunities for the drone industry, taking the place of expensive manned aircraft for many applications, and introducing the possibility of urban air mobility. For VTOLs to reach their full potential in cargo delivery and urban air mobility, however, they must be able to fly beyond visual line of sight (BVLOS) and over people and vehicles, safely and reliably. This is how ParaZero is helping drone companies to realize their full potential- by providing the safety systems that ensure that vehicles, payloads, and people on the ground are all protected when unmanned aircraft take flight.

“VTOL unmanned aircraft represent the next step forward for the industry,” says ParaZero Director of Business Development and Regulation, Aaron Gabriel Gliner. “Around the world,

people are realizing that VTOL applications have major significance for the entire logistics and supply chain, for urban transportation, and for broad ranges of industrial and military missions. We've worked with our global partners around the world to ensure that VTOL providers can take advantage of safety solutions that enable BVLOS flight and unlock their potential."

One such global partner is leading Latin American drone delivery company, Speedbird Aero, who operate a fleet of proprietary delivery drones throughout Brazil and other countries, each with an integrated ParaZero parachute recovery system. Samuel Salomão, Speedbird Aero's Chief Product Officer, commented: "The ParaZero parachute safety system gives us more flexibility to prepare the missions, enabling Speedbird Aero to meet the safety regulations to fly closer to urban areas. This is crucial to make the business competitive, meeting the market demands."

The ParaZero SafeAir safety system is a sophisticated solution that can detect any potential problems in a flight before a human pilot could by continuously monitoring all aspects of the mission in real-time and autonomously stopping the propellers, sounding an alarm, and deploying a parachute in the event of a critical failure. The ParaZero SafeAir is one of the only available technologies that can slow the velocity of a falling unmanned system significantly enough to meet impact requirements for safety from regulatory bodies, and it's a proven way for drone manufacturers to demonstrate the safety of their systems for a wide variety of BVLOS applications and flight in urban environments and over people.

VTOL systems present unique challenges. ParaZero is leading the industry in providing a safety system that covers the entire mission of a VTOL: from vertical take off, transition to horizontal flight, high speed travel, and landing. ParaZero has worked with manufacturing and enterprise partners to develop proprietary algorithms designed to detect failures throughout the entire unique flight envelope of a VTOL.

"VTOL flight is complex," says Boaz Shetzer, ParaZero General Manager. "VTOL safety systems have to be able to cover every aspect of the flight envelope from a safety perspective, from the minute the vehicle launches until it's safely on the ground – and this what we've been able to achieve as a company."

The combination of ParaZero's world class safety systems to effectively support unmanned VTOL aircraft is significant for the drone industry. When BVLOS flight and flight over people are safe and reliable, new and world-changing applications like urban air mobility and on-demand cargo delivery become possible. At ParaZero, we're proud to be at the forefront of this new industry – making sure that safety is a given for every new application and aircraft that the unmanned industry imagines.

ParaZero (https://parazero.com/) is a world-leading developer of autonomous drone safety systems. Started in 2014 by a passionate group of aviation professionals and drone industry

veterans, ParaZero designs smart, autonomous parachute safety systems for commercial drones designed to enable safe flight operations over populated areas and beyond-visual-line-of-sight (BVLOS).

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