



UAS and SmallSat Weekly News

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Google company unveils drone delivery-network ambition October 9, 2023 By Chris Vallance



The technology is being tested "at scale" in Logan, Australia, where Wing delivers up to 1,000 packages a day. The company has also started trial drone deliveries in the Dublin suburb of Lusk. And it says it and other companies are in talks with the Department for Transport and the Civil Aviation Authority about agreeing regulations to allow drone deliveries in the UK.

The Wing Delivery Network comprises three basic hardware elements.

- the delivery drones
- pads where drones take off, land, and recharge their batteries
- autoloaders that allow companies to leave packages for collection

Using these elements, the company says, drones can pick up, drop off, travel, and charge in whatever pattern makes the most sense for the entire system - rather than just flying from one base to a customer and back.

An advantage of the system working as a network is it can quickly adapt to peaks in demand in particular areas. Charging-pad locations can also be added rapidly.

<https://www.bbc.com/news/technology-64891005>

Reliable Robotics and Inmarsat Satellite Communications for Remotely Piloted Aircraft March 9, 2023 News



Inmarsat, a leading provider of global mobile satellite communications, has teamed up with Reliable Robotics, an industry leader in safety-enhancing aircraft automation systems, to integrate remotely piloted aircraft systems safely and efficiently into the US National Airspace System and airspace around the world. This collaboration will leverage Inmarsat's Velaris satellite communications service to offer connectivity between remote pilots and aircraft, including voice and digital communication links with air traffic control.

This new operating model can be brought to market quickly without costly infrastructure and expand the operational range for Uncrewed Aircraft Systems (UAS). By automating cargo



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aircraft, Reliable Robotics aims to increase safety, improve efficiency, and open more routes to regional airports. The partnership will help to create a secure and consistent transmission of digital commands, telemetry, and voice data critical to remote aircraft operation, where the availability and integrity of the link are essential to overall performance.

https://uasweekly.com/2023/03/09/reliable-robotics-and-inmarsat-join-forces-to-develop-commercial-satellite-communications-solution-for-remotely-piloted-aircraft/?utm_source=rss&utm_medium=rss&utm_campaign=reliable-robotics-and-inmarsat-join-forces-to-develop-commercial-satellite-communications-solution-for-remotely-piloted-aircraft&utm_term=2023-03-10

New Sikorsky Long-Range Hybrid-Electric VTOL Demonstrator March 9, 2023 News



Lockheed Martin’s Sikorsky is set to take the aviation industry by storm with the production of the Hybrid-Electric Demonstrator (HEX), a **fully autonomous** hybrid-electric vertical-take-off-and-landing (eVTOL) prototype. With a gross weight of over **7,000-pounds**, this uncrewed aircraft will serve as a flying testbed to evaluate large aircraft design, novel propulsion systems and control architectures for sustained hover, and ranges greater than **500 nautical miles**.

“Sikorsky’s HEX aircraft will provide critical insights into the possibilities of electric systems in VTOL aircraft. Ultimately, we want to show the potential of large, advanced air mobility vehicles to perform utility missions for the U.S. military and transport passengers between cities,” says Paul Lemmo, Sikorsky president. https://uasweekly.com/2023/03/09/sikorsky-hex-project-hybrid-electric-large-vtol-aircraft/?utm_source=rss&utm_medium=rss&utm_campaign=sikorsky-hex-project-hybrid-electric-large-vtol-aircraft&utm_term=2023-03-10

Elistair Introduces ORION HL, A Tethered Drone Designed for Tactical Communications March 8, 2023 News



Elistair is pleased to announce the launch of Orion Heavy Lift (HL), to support growing demand for variable height antennas from military, public safety and homeland security customers.

As tactical communications evolve to match the rapidly changing needs of operators on the ground, tethered drones offer significant benefits when flexibility and mobility are critical. With the need of highly effective ground units to have increased mobility, tethered drones are enabling the



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establishment and extension of secured mobile networks, thanks to their rapid deployment time and persistence in the air.

Leveraging the original Orion platform used by military forces and security forces in over 30 countries for ISR missions, the Orion HL benefits from the same level of automation, ruggedization and safety architecture as its parent. Able to carry payloads of 4 kgs at 90 meters and 5 kgs at 50 meters height, for flight durations of **50 hours**, Orion HL is deployable in minutes and easily transportable. https://uasweekly.com/2023/03/08/elistair-introduces-orion-hl-a-tethered-drone-designed-for-tactical-communications/?utm_source=rss&utm_medium=rss&utm_campaign=elistair-introduces-orion-hl-a-tethered-drone-designed-for-tactical-communications&utm_term=2023-03-09

Textron Receives Special Airworthiness Certificate for Aerosonde Unmanned Aircraft System John Pullen | March 8, 2023



Textron Systems recently received a special airworthiness certificate from the Federal Aviation Administration (FAA) to perform civil unmanned aircraft operations in **Blackstone, Virginia**. These special certifications will allow the company to further test its unmanned aircraft systems (UAS) in a convenient location, thanks to its proximity to training facilities.

Special certificates are issued for a multitude of aircraft operation categories, including primary (aircraft flown for personal use), restricted (aircraft flown for purposes including agriculture, aerial surveillance, and weather control), and experimental (which involves research and development, crew training, exhibitions, and unmanned aircraft systems).

The [airworthiness certificate Textron Systems received](https://www.aviationtoday.com/2023/03/08/textron-recvies-special-airworthiness-certificate-for-aerosonde-unmanned-aircraft-system/?oly_enc_id=7021F0632090D7B) is a special certificate (abbreviated as SAC-EC). It will allow the company to fly its Aerosonde MK 4.7G uncrewed aircraft system. With the ability to operate land-based and sea-based operations, the Aerosonde Small Unmanned Aircraft System uses features like full motion video, voice communications relay, signals and communications intelligence, 3D mapping, and automatic identification systems to offer a variety of benefits to its customers. The aircraft has a wingspan of 12 feet and a range of 75 nautical miles, all while boasting a small footprint that does not require alterations to infrastructure on ships to accommodate it. https://www.aviationtoday.com/2023/03/08/textron-recvies-special-airworthiness-certificate-for-aerosonde-unmanned-aircraft-system/?oly_enc_id=7021F0632090D7B

Drone used to find lost dogs spurs a charity with 1,400 rescues to its growing tally

Bruce Crumley - Mar. 10th 2023



When *DroneDJ* last visited Phil James in 2021, the former police officer had focused his passion for [piloting drones into looking for lost dogs](#) in his Nottinghamshire, UK, homebase and reuniting them with their owners – work that by April of that year had resulting in 47 of those happy endings. Cut to March 2023, and James’s aerial efforts have increased that joyful total to nearly **1,400**.

Not only has James’s work with his drones relieved the anguish and heartbreak of that enormous group of dog lovers by [locating their missing best friends](#), but in doing so he’s also broadened the network of people who have joined him in that volunteer activity. Since he began using his UAV to locate lost dogs in 2021, so many individuals offered to pitch in that he decided to start a Whatsapp group to permit faster organization deployment of people to search areas.

As that gained speed and size, what initially began as the Phil James Drone Services Lost Dogs [page on](#) Facebook has now been transformed to the full-fledged, officially registered charity [Drone to Home](#).

The organization now counts seven members on its full-time team and relies on over a hundred other people who assist in searches – some with UAVs, others on foot – or mount hunts of their own in farther-flung areas of the surrounding East

Midlands. <https://dronedj.com/2023/03/10/drone-used-to-find-lost-dogs-spurs-a-charity-with-1400-rescues-to-its-growing-tally/>

This docking system for drones can be installed on any car

Ishveena Singh - Mar. 10th 2023



Heisha, a Chinese company that specializes in manufacturing drone-in-a-box solutions, is out with its latest offering, and it’s one that will convert your car into a drone docking station.

The new Heisha [DCap Pro](#) is a stylish drone dock with a metal body that can be installed on any car like a rooftop cargo carrier. The IP55-rated solution is compatible with multiple drone automation software and allows for autonomous functions



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such as one-click takeoff, presetting of flight routes, precision landing, and automatic battery charging.

The charging function, specifically, comes with multiple layers of protection. The drone battery is protected from both overcharging and over-current. In addition, an intelligent air conditioning system prevents battery overheating. According to the company, the [DJI Mavic 3](#) battery can be charged fully in the dock in 40 minutes.

Furthermore, the car dock comes integrated with a diagnosis system that executes the bulk of monitoring and maintenance work, including conducting preflight checks. You can check the drone's battery's capacity in real time and open or close the dock cover remotely using a PDA (personal digital assistant) device.

Broadly, DCap Pro can charge most 2 cells to 14 cells LiPo-powered drones. Meaning, you can use the car dock with a range of DJI aircraft, including the new Mavic 3 Enterprise series or the M30, which is one of the most compact and feature-filled enterprise drones on the market. The docking station is also compatible with several Autel, Parrot, and Skydio drones.

<https://dronedj.com/2023/03/10/dji-drone-car-docking-mount/>

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U.S. Drone Company Skyfish on the Made in the U.S.A., NDAA Compliant

Market Miriam McNabb March 10, 2023



Over the last six years, the number and size of US-based drone manufacturers – and their opportunities – have grown significantly. [Skyfish](#), US manufacturer of engineering grade drones, says this can be attributed in part to the efforts of the U.S. Federal Government to ban Chinese drone technology and grow the domestic market. The timeline shows the government's increasing pressure to reduce reliance on foreign-made drone platforms from 2017 to the present. Efforts to reduce US dependence on imported technology continue to influence the development of domestic drone manufacturing.

“The ban on Chinese drone technology has created an opportunity in the market for U.S. manufacturers,” says Dr. Orest Pilskalns, CEO of Skyfish. “Skyfish is one of the companies that has been able to develop our offering and grow significantly as a result.”



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<https://dronelife.com/2023/03/10/u-s-drone-company-skyfish-on-the-made-in-the-u-s-a-ndaa-compliant-market-a-timeline/>

nDro Obtains FAA BVLOS Waiver for Solar Farm Inspections March 8, 2023 Scott Simmie, InDro Robotics



InDro Robotics has obtained a waiver from the Federal Aviation Administration to conduct Beyond Visual Line of Sight flights.

The waiver will allow InDro to expand its successful program of remotely piloted infrastructure inspections where we ship a drone to the location – and instruct a person there to be a Visual Observer during the flight.

Specifically, the FAA waiver permits InDro to remotely operate drone inspections of fenced solar farms in Class G airspace, 10 miles (16 km) from airports. Operations can reach a maximum altitude of 400' AGL.

The waiver opens the skies for InDro to tap into a large market, remotely inspecting some of the 2,500+ solar farms in the United States.

Solar farms require regular inspection. Traditionally, these have been done by employees walking the grounds with a handheld thermal sensor, plus their own visual inspection. But this task is time-consuming and can last days at a large facility.

As a result, many solar farms have switched – or are in the process of switching – to aerial inspection using drones. Combining visual and thermal inspection from above, issues with broken, malfunctioning and even dirty panels can be quickly identified. Many solar farms can be inspected in less than an hour and even large installations usually take less than a day.

<https://www.legendaryleadersininnovation.com/public/topics/23/UAS>

[FlyH2](#) Aerospace has announced the maiden flights of its hydrogen-electric Dragonfly V March 13, 2023

Cape Town-based [FlyH2](#) Aerospace has announced the successful maiden flights of its hydrogen-electric Dragonfly V, a commercial UAV designed for a range of applications requiring long endurance or payload flexibility. The flight tests took place last week in Citrusdal, approximately two hours outside of Cape Town, South Africa.



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While there is still a way to go until the Dragonfly V is fully ready for production, the aircraft has already demonstrated remarkable handling and efficiency during its first flights. Dragonfly V is a fixed-wing STOL (Short Take-Off and Landing) drone that is targeted for use in multi-mission applications in landscape management such as agricultural pest control, forestry, farm security, and wildfire and wildlife management including anti-poaching. Capable of carrying heavy and high-volume cargo, Dragonfly V is also ideal for long-range humanitarian airdrops.

FlyH2 is actively raising capital to take its product to market. The company has a growing list of orders and is accepting pre-orders, secured with a deposit, to reserve a place on the waiting list. Once Dragonfly V is production-ready, the aircraft will achieve up to **24 hours** of hydrogen-fueled flight, depending on payload, making it an ideal platform for extended missions.

<https://www.legendaryleadersininnovation.com/feeds/410/results/d370fda0a3d1013b25ab0242ac110002>

Marshall Futureworx Utilizes Robotic Ecosystem for Offshore Wind Farm Inspection Services

March 13, 2023 News



Marshall Futureworx has launched Lilypad, a revolutionary autonomous ecosystem that uses multiple BVLOS (Beyond Visual Line of Sight) UAVs to provide on-demand offshore inspection services for wind farms. The system is designed to enable wind farm operators to monitor the real-time performance of wind turbines and predict maintenance

requirements more accurately.

By reducing the requirement for offshore personnel during inspections, Lilypad minimizes the cost and impact on the environment while improving the frequency and quality of intelligence operators gain through remote inspections. Lilypad will also enable wind farm operators to extend the overall lifecycle of their turbines.

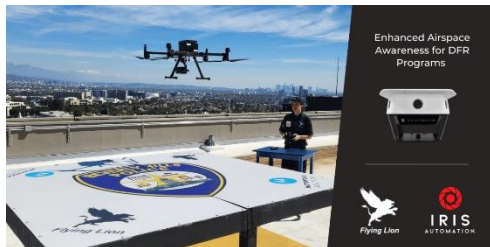
The UK government has set an ambitious target to achieve 50 GW installed offshore wind capacity by 2030 and potentially more than 100 GW by 2050. As government and industry



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continue to advance the UK offshore wind capability, new and scalable technologies such as Lilypad are required to inspect, maintain, and ensure the efficiency of wind turbines while minimizing costs to energy users. https://uasweekly.com/2023/03/13/marshall-futureworx-utilizes-robotic-ecosystem-for-offshore-wind-farm-inspection-services/?utm_source=rss&utm_medium=rss&utm_campaign=marshall-futureworx-utilizes-robotic-ecosystem-for-offshore-wind-farm-inspection-services&utm_term=2023-03-13

Iris Automation, Flying Lion improve police drone as first responder performance Bruce Crumley - Mar. 13th 2023



[Iris Automation](#) has announced the cooperation to assist [Flying Lion](#) in the services it provides the various police units and public agencies it works with, particularly in improving their drone as first responder activities. Incorporation of [Casia G detect and avoid](#) tech in that mix will allow [beyond visual line of sight](#) (BVLOS)

flights in the opening phases of that activity without needing to wait for a visual observer to reach the overflowed area first.

Flying Lion says it has over **22,000 drone as first responder flight hours** to its record thus far in its work with California police forces in Chula Vista, Redondo Beach, Santa Monica, Beverly Hills, and elsewhere. To respect Federal Aviation Administration rules in those activities, missions have been flown by remote pilots backed up by on site visual observers. That required human deployment adds time to [UAVs reaching targeted areas](#) to stream back imagery for assessments and preparation of emergency action.

Use of [Iris Automation Casia G](#) ground-based detect and avoid systems, however, will **remove the obligation for a human observer** in remotely piloted drone as first responder missions and thereby enhance the services Flying Lion provides police forces in preparing [emergency reaction capabilities](#). <https://dronedj.com/2023/03/13/iris-automation-flying-lion-improve-police-drone-as-first-responder-performance/#more-91611>



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Ciconia's System Resolves Pre-Planned Midair Conflicts Between Drone and Helicopter March 13, 2023



Ciconia Ltd., a leading provider of advanced aviation technologies, has recently concluded a successful series of flight tests that demonstrated the effectiveness of its C&CAS (Coordination & Collision Avoidance System) in resolving pre-planned midair conflicts between a drone and a helicopter. The tests were conducted in Israel between January and February 2023 as part of the INDI

(Israeli National Drone Initiative).

The C&CAS is a decentralized Collision Avoidance System that is designed for both small UAVs and large aerial vehicles. During the flight tests, the C&CAS successfully resolved all pre-planned midair conflicts between the two aerial vehicles, which were part of a first responder's scenario that involved a medical evacuation helicopter and a fire fighter's drone that was monitoring a fire.

The C&CAS is a lightweight, low energy consumption, V2V (Vehicle to Vehicle) hybrid decentralized collision avoidance system that was installed onboard both aerial vehicles and monitored both platforms. Only when relevant, the C&CAS informs its own platform's pilots, those onboard and remote, that there is another platform and its relative location and vector. https://uasweekly.com/2023/03/13/ciconias-ccas-system-successfully-resolves-pre-planned-midair-conflicts-between-drone-and-helicopter-during-flight-tests/?utm_source=rss&utm_medium=rss&utm_campaign=ciconias-ccas-system-successfully-resolves-pre-planned-midair-conflicts-between-drone-and-helicopter-during-flight-tests&utm_term=2023-03-13

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DeTect's Largest, Longest Range Surveillance Radar: Aircraft Detection for 30 Nautical Miles Miriam McNabb: March 13, 2023 by DRONELIFE Staff Writer Ian M. Crosby



Leading radar manufacturer [DeTect, Inc.](#) has announced the production of the HARRIER BAR300, the company's largest and longest-range radar featuring an extended range of more than 30 nautical miles for aircraft detection.

DeTect makes radars for aviation: for counter drone and drone



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detection purposes, bird detection, and to facilitate BVLOS flight for unmanned systems. Their newest offering provides a long-range solution for multiple purposes.

An X-band, solid-state air and marine surveillance radar, the BAR(TM) series radar has been in development by DeTect since 2021 for extended range airspace security, beyond visual line-of-sight (BVLOS) drone operation, Aircraft Detection Lighting System, bird monitoring and long-range coastal surveillance use cases. The first production article of the radar is currently undergoing final certification testing at DeTect's Florida-based R&D range. The solution is anticipated to be released to the market by the end of the second quarter of 2023.

<https://dronelife.com/2023/03/13/detects-largest-longest-range-surveillance-radar-aircraft-detection-for-30-nautical-miles/>

BMT Receives Patent for An Autonomous Adaptable Device for Drone Deliveries

March 14, 2023



BMT, a leading international design, engineering, science, and risk management consultancy, is pleased to announce this month that it has been granted a patent by the U.K. Intellectual Property Office for a novel concept called 'SPARROW', an autonomous 'air-ground payload transfer device' with truly disruptive capabilities for drone delivery

applications.

With SPARROW, BMT has addressed the inherent problem of large, noisy, and potentially hazardous delivery drones having to land or hover low over the payload destination, potentially close to people in unpredictable, sensitive, and cluttered environments.

SPARROW is fundamentally different to winch systems commonly used in current trials for delivery drones. On a winch, the payload swinging at the bottom end of a line is raised or lowered by the cable drum attached to the underside of the fuselage and moved horizontally by subtle movements of the drone above. This provides poor control of the payload, especially in windy conditions and limits the maximum height of the drone. In comparison, SPARROW is located at the bottom end of the line with the payload with its own power, sensors and actuators; it has autonomous control of its descent using an internal drum, while making precise and immediate horizontal adjustments to counter wind effects using 4 small, quiet pusher fans. SPARROW takes responsibility of the delivery allowing the larger delivery drone to remain much, much higher at the destination, relatively unheard and unobtrusive at ground



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level. https://uasweekly.com/2023/03/14/bmt-receives-patent-for-sparrow-an-autonomous-and-adaptable-device-for-drone-deliveries-in-any-environment/?utm_source=rss&utm_medium=rss&utm_campaign=bmt-receives-patent-for-sparrow-an-autonomous-and-adaptable-device-for-drone-deliveries-in-any-environment&utm_term=2023-03-14

Royal Navy's Heavy Lift Challenge Chooses Animal Dynamics' Parafoil UAV March 14, 2023



Animal Dynamics' Stork STM parafoil UAV has been chosen to participate in the next phase of the Royal Navy's Uncrewed Aerial Systems Heavy Lift Challenge (UASHLC), a joint effort between Defence Equipment & Support's Future Capability Group and the Royal Navy's Office of the Chief Technology Officer and 700X Naval Air Squadron. The Stork STM is an autonomous aerial logistics vehicle capable of beyond visual line of sight operations and carrying payloads weighing 135kg over a 400km distance.

The Stork STM's ground-breaking parafoil design overcomes many of the challenges associated with heavy-lift multirotor and hybrid VTOL designs, which are often range limited due to the need for significant power during take-off and landing.

The Stork STM will now continue to the next round of testing with flight trials planned to take place in Cornwall. Animal Dynamics will also be integrating secure satellite communications that demonstrates the vehicle can be operated anywhere in the world. It will also be fitted with a sonobuoy dispenser showcasing that the UAV's payload space can be used for a number of mission types as well as go through additional wing development work that includes a retraction capability making it safe for deck operations. https://uasweekly.com/2023/03/14/royal-navys-uncrewed-aerial-systems-heavy-lift-challenge-uashlc-phase-2-chooses-animal-dynamics-stork-stm-parafoil-uav/?utm_source=rss&utm_medium=rss&utm_campaign=royal-navys-uncrewed-aerial-systems-heavy-lift-challenge-uashlc-phase-2-chooses-animal-dynamics-stork-stm-parafoil-uav&utm_term=2023-03-14



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SITA and Volocopter Partner to Develop Digital Infrastructure for Vertiports

March 14, 2023 News



Volocopter, the pioneer of urban air mobility (UAM), and SITA, the world's leading IT provider to the air transport industry, have entered a partnership, with SITA selected as Volocopter's preferred digital and IT systems partner for vertiports. Under the agreement, SITA has become **the latest investor** to join Volocopter's Series E funding round, cementing the strategic vision espoused by this partnership.

UAM will offer a new form of sustainable aviation, replete with multiple mobility options to cities worldwide. Flights can be hailed via designated boarding points (or "vertiports").

SITA will deploy its expertise in air transport for the emerging UAM industry, developing new operating standards and a digital-first passenger experience. SITA's portfolio includes a wide range of IT solutions, including airport management and operations, passenger operations, flight and aircraft operations, baggage processing, and border management.

Volocopter is known for its integrated UAM ecosystem approach. Its digital operating system, the VoloIQ, connects all partners, thus enabling a holistic service. The VoloIQ therefore enables a digital-first approach that will translate to end-to-end passenger air transportation experiences. This cloud-based system is **in the process of being certified** by the relevant aviation authorities. https://uasweekly.com/2023/03/14/sita-and-volocopter-partner-to-develop-digital-infrastructure-for-vertiports/?utm_source=rss&utm_medium=rss&utm_campaign=sita-and-volocopter-partner-to-develop-digital-infrastructure-for-vertiports&utm_term=2023-03-14

Parallel Flight's Firefly heavy-lift drone to protect Wake Island from destructive rats

Bruce Crumley - Mar. 14th 2023



Specialized [heavy-lift drone](#) producer [Parallel Flight](#) Technologies has been tapped by [USDA Wildlife Services](#) to adapt its Firefly UAV developed to assist firefighters for a natural wildlife preservation project aiming to eradicate a destructive population of invasive rats on Wake Island.



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[The operation](#) will be carried out in conjunction with the US Air Force, which is responsible for the US-administered atoll and maintains a mid-Pacific base there. Under the plan, Parallel Flight will modify its hybrid-powered [Firefly heavy-lift drone](#) to operate long-endurance missions hauling a specialized spreader to distribute pellets made for the rat eradication objectives around Wake Island.

If successful, the company's UAV, which can carry **100 lb. payloads for up to two hours**, will replace far more expensive and potentially dangerous helicopter flights for such efforts.

The Parallel Flight Firefly [heavy-lift drone](#) gets that kind of performance by combining internal combustion engines with a 60V, 5000 mAh battery. It has also been adopted for big industrial, engineering, construction, medical supply deliveries, and humanitarian operations, during which by limiting payloads to 40 lb. the craft has remained aloft for up to four hours – and a whopping seven if loads are cut to 10 lb. <https://dronedj.com/2023/03/14/parallel-flights-firefly-heavy-lift-drone-to-protect-wake-island-from-destructive-rats/#more-91630>

Archer nearing completion of its first production eVTOL air taxi Bruce Crumley - Mar. 14th 2023



Electric vertical takeoff and landing (eVTOL) aircraft developer [Archer Aviation](#) has announced it is moving rapidly toward assembly of its first production [air taxi](#), just four months after [unveiling the craft in November](#).

At the same time, the company revealed it had finalized details with local authorities in Georgia on financing agreements for its [future air taxi production facility near Atlanta](#). [Archer said it was nearing](#) completion of its first production grade unit of its Midnight [eVTOL](#). The company said the plane's wing, tail, fuselage, and other main aerostructures have been manufactured and assembled, with much of the wiring, electronics, actuators, and other systems also now in place.

The progress made on bringing the [air taxi](#) together means Archer should be able to begin testing of its production eVTOL sometime toward the middle of the year. Once that the first model of [Midnight conforms entirely to the designs and specifications](#) required for the certification process, all trials of the craft will qualify toward fulfilling conditions to obtain final regulator authorization. <https://dronedj.com/2023/03/14/archer-nearing-completion-of-its-first-production-evtol-air-taxi/#more-91649>



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Airbus and Norwegian Air Ambulance Foundation develop eVTOL capability ¹⁴

MARCH 2023



The parties will jointly measure the added value of electric vertical take-off and landing (eVTOL) aircraft for a selection of medical services and applications across the country and integrate operational requirements.

Focusing on how eVTOL aircraft can be used for different types of air medical missions, Airbus Helicopters and the Norwegian Air Ambulance Foundation will develop a comprehensive **roadmap** toward reducing emergency response time through researched scenarios.

To improve patient outcome and the overall performance of the Norwegian Emergency Medical Services system, the signatories will follow a long-term strategic approach to research the compatibility of existing assets, such as conventional helicopters, and eVTOLs when the technology enters into service.

This approach could be further expanded in the region through collaboration with other countries to optimize operations beyond the national healthcare system. <https://www.aero-mag.com/airbus-and-norwegian-air-ambulance-foundation-develop-evtol-capability>

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Elistair Introduces the Orion HL Tethered Drone for Tactical Communications

Miriam McNabb March 14, 2023 by DRONELIFE Staff Writer Ian M. Crosby



Tethered drone system manufacturer [Elistair](#) has announced the launch of its Orion Heavy Lift to meet an increasing demand for variable height antennas from military, public safety and homeland security customers,

The Orion HL builds on the original Orion platform employed by military forces and security forces in more than 30 countries for ISR missions, and retains its level of automation, ruggedization and safety architecture. Easily transported and deployed, Orion HL can bear payloads of 4 kgs at 90 meters and 5 kgs at 50 meters height for up to **50 hours of flight**.



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With the addition of Elistair's new Payload Development Kit, partners can perfectly integrate their payloads and sensors, increasing the capabilities of the platform for the end-users. A beta-testing program with selected partners enabled the integration of a CORDIS Array II from Radionor, a 5G relay and a SIGINT payload.

First deliveries are expected by the end of May 2023. <https://dronelife.com/2023/03/14/elistair-introduces-the-orion-hl-tethered-drone-for-tactical-communications/>

Russian Warplane Hits American Drone Over Black Sea, U.S. Says Eric Schmitt March 14, 2023

The incident was the first known physical contact between the two militaries since the war in Ukraine began last year.



WASHINGTON — A Russian warplane struck a U.S. surveillance drone over the Black Sea on Tuesday, hitting the drone's propeller and causing its American operators to bring it down in international waters, according to the Pentagon, in the first known physical contact between the Russian and American militaries since the war in Ukraine started last February.

The downing of the MQ-9 Reaper, a workhorse of the American military's airborne reconnaissance fleet, immediately escalated tensions between the White House and the Kremlin as U.S. officials accused the Russian forces involved in the incident of behaving dangerously.

American military officials said the unarmed Reaper drone was flying a typical reconnaissance mission when it was intercepted by two Russian Su-27 fighter jets about 75 miles southwest of Ukraine's Crimean Peninsula, which Russia has used as a base for launching devastating strikes. <https://www.nytimes.com/2023/03/14/us/politics/russia-us-drone-black-sea.html>

China's flying car developer eyes ASEAN aerial tour market KENTARO IWAMOTO and SAYUMI TAKE, Nikkei staff writers March 15, 2023

TOKYO -- China's EHang Holdings, a global leader in the development of flying cars, considers Southeast Asia's tourism sector could be a significant market for air mobility systems, according to the company's senior executive.



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Expected to be a new mode of transportation, Morgan Stanley has forecast that the global market for flying cars will reach nearly \$1.5 trillion by 2040. Major developers in the nascent field include **Volocopter of Germany and Joby Aviation of the U.S.**



An EHang flying car ferries passengers during a test flight in Japan.

EHang has been testing its vehicles in preparation for regulatory approval. The company's exchange filings show preorders of over **1,200 units** as of September 2022, signaling the possible existence of customers in the medical and tourism sectors.

Last month, EHang succeeded in carrying passengers on a demo flight of its two-seater EH216-S [in the Japanese city of Oita](#), where a group was transported pilot-free about 400 meters at an altitude of 30 meters.

The flight was EHang's "**first passenger-carrying demo flight in an open airspace outside China**," chief financial officer Richard Liu told Nikkei Asia during a February interview in Tokyo, adding that EHang will conduct more test flights in Japan. https://asia.nikkei.com/Business/Aerospace-Defense-Industries/China-s-flying-car-developer-eyes-ASEAN-aerial-tour-market?utm_campaign=IC_asia_daily_free&utm_medium=email&utm_source=NA_newsletter&utm_content=article_link&del_type=1&pub_date=20230315190000&seq_num=10&si=1228ca27-a03e-4c46-86b5-8ed36866c828

Red Cat Holdings Invests in Firestorm Modular Unmanned Aerial Systems Company

March 15, 2023 Military | News



[Red Cat Holdings, Inc.](#), a military technology company integrating robotic hardware and software to protect and support the warfighter, has made a materially significant financial investment in [Firestorm](#), an American company developing **the first** completely Modular Unmanned Aerial System (MUAS) that is **3D printed and payload agnostic**.

Firestorm is building a new category of fixed-wing UAS with 30-day product iterations, a commitment to open-system architectures, and an additive manufacturing approach that allows them to scale production in an elastic manner.

Firestorm's founding team has deep industry expertise in additive manufacturing, aerospace, and defense and understands how to build and quickly scale dual-use technology



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companies. https://uasweekly.com/2023/03/15/red-cat-collaborates-with-athena-ai-to-integrate-artificial-intelligence-and-computer-vision-in-the-new-teal-2-military-drone/?utm_source=rss&utm_medium=rss&utm_campaign=red-cat-collaborates-with-athena-ai-to-integrate-artificial-intelligence-and-computer-vision-in-the-new-teal-2-military-drone&utm_term=2023-03-15

Inmarsat and Heron Collaborate to Facilitate Unmanned Aircraft Operations in Singapore March 15, 2023



Inmarsat, a global leader in satellite communications, has announced a strategic partnership with Singapore-based Heron AirBridge, an Uncrewed Aircraft System Traffic Management (UTM) specialist in the Asia Pacific region. The collaboration follows a Memorandum of Understanding signed at the Drones

Asia event.

Together, Inmarsat and Heron AirBridge aim to safely **integrate uncrewed aircraft into Singapore's commercial airspace**. This will be achieved by combining Inmarsat's Velaris, a reliable command and control datalink designed specifically for UAVs, with Heron's AirBridge, a comprehensive and adaptable UTM system.

As part of the partnership, Inmarsat will provide Heron with low size, weight, power, and cost Velaris satellite terminals for UAVs. These terminals will deliver a secure datalink required for Beyond Visible Line of Sight operations. This collaboration will mark **the first deployment** of Velaris technology **in the Asia Pacific region**, with trials set to begin later this year.

Inmarsat and Heron will also leverage the Velaris Partner Network, collaborating with stakeholders across the aviation community to develop regulatory frameworks and technologies. These efforts will help increase the number of Uncrewed Aerial Vehicles operating in Singapore's airspace and offer a model for successful integration that can be **implemented globally**. https://uasweekly.com/2023/03/15/inmarsat-and-heron-collaborate-to-facilitate-unmanned-aircraft-operations-in-singapores-airspace/?utm_source=rss&utm_medium=rss&utm_campaign=inmarsat-and-heron-collaborate-to-facilitate-unmanned-aircraft-operations-in-singapores-airspace&utm_term=2023-03-15



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Pearland Police authorized to operate BVLOS drones as first responders Ishveena Singh - Mar. 15th 2023



The Federal Aviation Administration has authorized the Pearland Police Department in **Texas** to operate its drones as first responders beyond visual line of sight (BVLOS) without any visual observers.

Pearland is a rapidly growing city south of Houston with a population of 129,600 and 179 sworn police officers. It covers a mostly residential area of 49 square miles and includes major urban facilities such as hospitals, schools, colleges, and shopping centers.

Pearland PD introduced a drone as first responder (DFR) program because it wanted to improve the response to emergency calls. Drones can be dispatched immediately, circumventing traffic. And they can offer an advanced assessment of the incident upon arriving at the scene, thus reducing risks to officers. Having these “early eyes on scene” helps the police to determine the appropriate level of response, including reducing or increasing resource deployment.

DFR programs typically see highly automated drones in use, centrally managed by a small number of personnel. Having the waiver to operate BVLOS without visual observers, meanwhile, removes the requirement for the operator to be co-located with the drone. This potentially increases the ratio of drones to operators and helps to improve scale and efficiency.

Pearland PD achieved this [milestone](#) using **Iris Automation’s Casia G ground-based air surveillance system and DroneSense’s situational awareness software**. Casia G creates a volume of monitored airspace without the need to integrate any hardware onto the drone itself. Using computer vision technology, the solution alerts the Remote Pilot in Command (RPIC) to an intruder who presents a collision risk. The RPIC can then assess the risk and command the drone to maneuver to safe zones. <https://dronedj.com/2023/03/15/pearland-police-drone-first-responder/#more-91663>

Air Force Global Strike Command’s Innovation Lab Unveils Counter-Small UAS Competition Naomi Cooper March 15, 2023

Air Force Global Strike Command’s innovation arm has launched a new competition to develop technology designed to counter threats posed by small unmanned aerial systems.



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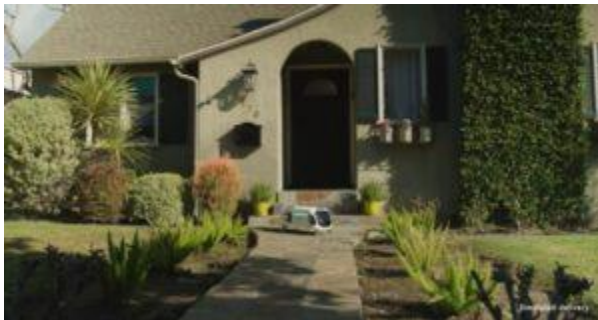


STRIKEWERX said Tuesday it is seeking submissions from private companies, academia and small businesses for the [Mobile C-sUAS Swarm Defeat Challenge](#), which aims to protect mobile transport systems against drone swarms.

Russ Mathers, director of STRIKEWERX, said the command is encouraging businesses, educators, and inventors to bring all ideas to the table to help its government partners “learn about the latest and greatest technology available.” <https://executivegov.com/2023/03/air-force-global-strike-command-unveils-counter-small-uas-competition/>

17Mar23

Zipline Reveals Home Drone Delivery Platform Miriam McNabb March 16, 2023 by DRONELIFE Staff Writer Ian M. Crosby



[Zipline](#) has revealed its new Platform 2 (P2) home delivery system, designed to quietly complete deliveries up to **7 times as fast** as traditional automobile delivery.

Zipline’s drones (Zips) fly over 300 feet above ground and are almost inaudible. When the Zip arrives at its destination, its fully autonomous delivery droid maneuvers down a tether to drop off its package gently and accurately.

Various healthcare and restaurant businesses have already signed on to use Zipline’s new platform. Sweetgreen is partnering with Zipline, enabling customers to receive their orders using **97% less energy** than traditional automotive methods.



Michigan Medicine will use the service to more than double its number of prescriptions filled annually through its in-house pharmacy. Intermountain Health will leverage the service to deliver prescriptions to patients’ homes in the Salt Lake City metro area, and MultiCare Health System intends to use it to hasten diagnostics and deliver prescriptions and medical devices through its network of facilities. <https://dronelife.com/2023/03/16/zipline-reveals-home-drone-delivery-platform/>