



UAS and SmallSat Weekly News

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29Apr23

Red Cat Launches the Teal 2: the Drone for Nighttime Ops Miriam McNabb April 27, 2023 by DRONELIFE Staff Writer Ian M. Crosby



April 26, 2023 marks the official launch of military technology company [Red Cat Holdings](#)' new military-grade sUAS, the Teal 2.

The drone will be on public display for the first time at the 2023 AAAA Army Aviation Mission Solutions Summit in Nashville, Tennessee. The system is manufactured at Red Cat's Salt Lake City factory.

The first sUAS equipped with [Teledyne FLIR](#)'s new Hadron 640R sensor, the Teal 2 grants customers the highest resolution thermal imaging available in a compact form factor specialized for operating at night. The rugged, portable Teal 2 can be deployed in the harshest environments. Multi-vehicle command and control enables a 360-degree view of a target, or ISR on multiple targets. In addition to Teledyne FLIR, technology partners for the Teal 2 include [Athena AI](#), [Reveal Technology](#) and [Tomahawk Robotics](#).

U.S. Customs and Border Protection, an early adopter of Teal 2, **ordered 54 units**, which are currently being leveraged to grant supplemental airborne reconnaissance, surveillance and tracking capability to improve situational awareness for U.S. field commanders and agents. <https://dronelife.com/2023/04/27/red-cat-launches-the-teal-2-the-drone-for-nighttime-ops/>

Air taxi maker Joby bags two major eVTOL deals as April ends Bruce Crumley | Apr 28 2023



Leading developer of battery-powered air taxis, [Joby](#), is finishing April with a pair of major business accords, including a deal worth **\$55 million** to provide its [electric vertical takeoff and landing](#) planes (eVTOL) and flight training to the US Air Force. That extended the total amount of its provisional deals with the Air Force to as much as \$131 million.

On Thursday, meanwhile, [Joby announced](#) a separate agreement under which its longtime investor Toyota Motor Corporation Inc. will supply key powertrain and actuation components for the [next-generation aircraft](#).



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Under the agreement, Joby will retain ownership of the [eVTOLs](#) it will train US Air Force pilots to operate, with the first of those [air taxis](#) expected to be delivered to Edwards Air Force base in early 2024. Those will be used for cargo and passenger transport and other purposes and provide emissions-free flights that won't require the usual and expensive stockpiling of fuel. <https://dronedj.com/2023/04/28/air-taxi-maker-joby-bags-two-major-evtol-deals-as-april-ends/>

Wing focuses on delivery drone testing in hostile weather conditions Bruce

Crumley | Apr 28 2023



Leading [drone delivery](#) company [Wing](#) is pushing ahead with plans to considerably scale its aerial activity through intensified testing of its craft in the kinds of challenging weather conditions the entire sector will have to overcome if it's to become a true challenger to legacy road transportation.

Alphabet-owned [Wing says](#) it has intensified its work to enable [drone operation](#) in inclement or even hostile weather as part of a continued drive to establish UAV delivery as both a common and expanding service. In doing so, its experts have been putting company craft through tests involving frigid and sweltering temperatures, as well as punishing wind and rain.

Those moves come in the wake of [Wing's unveiling last month](#) of a dramatically re-conceptualized strategy and hardware approach for [drone delivery](#) covering wider areas. Those include docking and charging stations permitting decentralized operation of multi-destination UAVs that previously had been limited to point-to-point activity.

<https://dronedj.com/2023/04/28/wing-focuses-on-delivery-drone-testing-in-hostile-weather-conditions/>

EvFly Chooses Volatus as Exclusive Provider of eVTOL Infrastructure Jessica Reed |

April 27, 2023



Volatus will be the exclusive provider of eVTOL infrastructure and charging stations to enable EvFly's projects related to advanced air mobility. (Photo: EvFly)

Volatus Infrastructure and EvFly just signed a Letter of Intent (LOI) naming Volatus as the exclusive provider of electric



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vertical take-off and landing infrastructure and charging stations to enable EvFly's projects related to advanced air mobility (AAM).

Volatus, which launched in 2021, offers a vehicle agnostic charging station, three main eVTOL infrastructure designs, and an app as well as maintenance programs. The company partnered with [Eve Air Mobility](#) late last year to develop an agnostic vertiport automation solution.



Earlier this month, EvFly signed another LOI with the Germany-based F.A.S.T. group that specializes in developing eVTOL flight simulators. Through this agreement, the partners will collaborate on AAM flight simulators and pilot training.

Last month, AutoFlight, an eVTOL developer, [announced a deal with EvFly](#). EvFly will purchase 205 of [AutoFlight's Prosperity I](#) passenger eVTOL and cargo aircraft. According to the company, some of these aircraft will be used for operations in the UAE, Saudi Arabia, and elsewhere in the Middle East.

Volatus is also partnering with [eVTOL manufacturer PLANA](#). Based on a [Memorandum of Understanding](#) signed in February, the two companies will work together on eVTOL integration and vertiport development. https://www.aviationtoday.com/2023/04/27/evfly-chooses-volatus-as-exclusive-provider-of-evtol-infrastructure/?oly_enc_id=7021F0632090D7B

1May23

NASA, Reliable Robotics Partner on UAS Safety Hanneke Weitering April 27, 2023



Reliable Robotics is working to certify its remote-piloting capabilities in a modified Cessna 208 Caravan

Reliable Robotics has teamed with NASA to improve the safety of remotely piloted aircraft in the National Airspace System using FAA primary surveillance radar (PSR) data. Specifically, the partners wanted to explore the use of existing radar infrastructure for automated detect-and-avoid (DAA) systems on board autonomous aircraft.

Reliable Robotics is a California company developing "drop-in" autonomy kits to give legacy aircraft remote-piloting capabilities. Together with NASA, Reliable Robotics conducted a flight-test campaign in California using two of its experimental aircraft. During the flight tests, Reliable



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Robotics coordinated multiple encounters between the two aircraft while the FAA's ground-based radars and commercial air-to-air radars tracked the flights and collected data.

NASA is using that flight data to analyze and characterize the accuracy of the FAA's radars, and the results of the study will help the agency develop a safety case for DAA systems using PSR data. Reliable Robotics says making high-quality PSR data available to pilots could significantly improve situational awareness and help prevent mid-air collisions.

<https://www.ainonline.com/aviation-news/aerospace/2023-04-27/nasa-reliable-robotics-partner-uas-safety>

NASA's Ingenuity Mars helicopter has now flown more than 50 times April 27, 2023 Clive Simpson



NASA's Perseverance rover glimpsed the Ingenuity helicopter earlier this month after the rotorcraft's 50th flight. This view shows dust accumulation on the vehicle.

NASA's pioneering Mars helicopter Ingenuity continues to outperform its design specifications, having now notched up more than 50 record-breaking forays across the Red Planet's surface, **10 times as many flights as originally planned.**

Ingenuity's historic 50th flight took place on April 13, when it flew 1,057 feet in just under three minutes and reached a record altitude of 59 feet before descending into Belva Crater, which stretches for about half a mile.

Five days later, its mothership the Perseverance rover, which carried Ingenuity to Mars in 2021, traveled to within only 75 feet of the helicopter, its closest ever approach in the mission to date.

Ingenuity is **the first** machine to achieve powered flight across the skies of an alien world – a significant accomplishment given that the thin Martian atmosphere makes it difficult to achieve lift. To counteract this, Ingenuity is equipped with enlarged, specially shaped blades that rotate about 10 times faster than needed to fly on Earth. <https://spaceflightnow.com/2023/04/27/nasas-ingenuity-mars-helicopter-has-now-flown-more-than-50-times/>



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AUVSI Hill Day 2023: An Inside View of Policies, Priorities, and Problems Under

Discussion Miriam McNabb April 28, 2023 guest post by Matt Sloane, CEO and Founder of Skyfire Consulting and Atlanta Drone Group



[AUVSI](#) recently hosted their [annual Hill Day](#), an opportunity for drone industry stakeholders to gather and meet policy makers, face to face. In this DRONELIFE Exclusive, one attendee's summary and takeaways.

As I walked down First Street in Washington, DC towards the marble US Capitol building, past the Supreme Court and blooming cherry blossom trees, it hit me.

We were all there at the invitation of AUVSI (The Association for Uncrewed Vehicle Systems International) – our industry's trade group – to put real stories behind the lobbying efforts that group undertakes every day.

Yes, all of us were excited that the [Aviation Rulemaking Committee](#) brought forth a robust [set of guidelines for Beyond Visual Line of Sight](#) (BVLOS) operations in 2022 – the kind that will allow Amazon Prime Air to make deliveries to my front doorstep. But those suggested guidelines aren't likely to even begin the process of becoming rules until Spring of 2024 – 2 years after they were suggested.

Once they do, it'll be at least 2-3 years of public comments, final rule making and implementation before the full potential of this industry can be realized.

<https://dronelife.com/2023/04/28/auvsi-hill-day-2023-an-inside-view-of-the-policies-priorities-and-problems-under-discussion-dronelife-exclusive/>

Whisper Aero Targets Defense First for Ultraquiet Electric Propulsion

Graham Warwick April 18, 2023



Whisper's ultraquiet 55-lb. ISR drone has a single top-mounted 10-lb.-thrust electric ducted fan.

Electric aviation is in its infancy, equivalent to the piston era of a century ago. But propulsion startup Whisper Aero is already working to enable the transition from the propeller age to the jet age by developing ultraquiet,

ultraefficient electric ducted fans.



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Based in Crossville, Tennessee, Whisper Aero has raised **\$32 million** in Series A funding to grow its team and launch production, initially targeting U.S. Defense Department applications such as intelligence, surveillance, and reconnaissance (ISR) uncrewed aircraft that are inaudible from the ground.

The startup has validated its technology with flights of a custom-designed 55-lb. ISR drone powered by a single 10-lb.-thrust demonstrator propulsor. Flying over at about 200 ft., the Whisper drone **could not be acoustically detected** by a ground observer but the 2-lb. multicopter chase drone could clearly be heard at the same altitude, the company says.

<https://aviationweek.com/aerospace/emerging-technologies/whisper-aero-targets-defense-first-ultraquiet-electric-propulsion>

Riverside Health partners to deliver medication by drone to patients in Virginia

April 26, 2023 Jenny Beechener UAS traffic management news, Urban air mobility



A Virginia-based partnership is to deliver medical products to patients who live on the Eastern Shore and adjacent Tangier Island by drone for the medical services company Riverside Health. Partners include Riverside, DroneUp, Virginia Institute for Spaceflight & Autonomy (VISA) at Old Dominion University (ODU), the Accomack-Northampton Planning District Commission, and the Virginia Innovation Partnership Corporation (VIPIC).

In 2022, the partnership submitted a medical drone delivery project entitled, Drone Medical Package Delivery for Improved Transportation and Better Patient Outcomes, to the U.S. Department of Transportation for funding support. The project was one of 59 proposals awarded funding through the Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program out of a nationwide pool of 389 applications.

The medical cargo drone delivery project is divided into two categories; stage one: planning and prototyping and stage two: implementation. During stage one, Riverside will begin utilizing medical cargo drones from DroneUp, a leading autonomous drone delivery platform and drone services provider, to test and plan for the delivery of prescription medications to patients living in rural areas on the Eastern Shore, particularly for remote communities such as Tangier Island. Once stage one is successfully complete, the partnership will move into stage two, implementation, where medical cargo drones will be deployed from Riverside Shore Memorial Hospital (RSMH) delivering medications to a patient's



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doorstep. <https://www.unmannedairspace.info/latest-news-and-information/riverside-health-partners-to-deliver-medication-by-drone-to-patients-in-virginia/>

Seven different approaches to designing urban air mobility vertiports April 28, 2023 Philip Butterworth-Hayes Urban air mobility



As the urban air mobility (UAM) market approaches its commercialization phase, there are emerging seven different concepts of vertiport design: the essential, the simple, the elevated, the

integrated, the enclosed, the urban hub and the UAM/AAM regional hub. The distinctions between these are sometimes blurred (an elevated vertiport can also be an urban hub), but these different categories reflect the need to develop very different types of infrastructure to support different AAM/UAM services.

The April 2023 update of Unmanned Publications' [Global Urban Air Mobility Market Map](#) now lists UAM and AAM projects underway in **130 cities and regions of the world**. Updates and additions added in April 2023 comprise Villacarrillo and Zaragoza (Spain), Hezhou City and Hunan Province (China) Dubai and Brownsville South Padre Island International Airport, Choctaw Nation of Oklahoma, Greenport Austin Aviation Campus, and San Marcos Texas.

Among these new updates are widening views on how much money and space should be dedicated to vertiport terminals. It is clear from these early designs that one of the key challenges will be scalability, both of eVTOL size and flight frequencies.

<https://www.unmannedairspace.info/urban-air-mobility/vertiport-concepts-seven-different-approaches-to-urban-air-mobility-take-off-and-landing-areas/>

UAVOS Launches New AI Software for Automated Object Recognition and Tracking May 1, 2023 Counter UAS | News



[UAVOS](#) Inc., a leading developer and manufacturer of unmanned systems, has announced the launch of new AI software that incorporates video processing and computer vision algorithms for automatic object recognition and tracking. The software, featuring advanced Vision and Recognition AI algorithms,



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provides end-to-end solutions for autonomous labeling and model training of tracking algorithms **based on neural networks**.

The AI algorithms work by training a tracking algorithm based on a neural network to learn the features of objects and their movements within a video sequence. The software has been successfully integrated into UAVOS' Pan-Tilt Platform for real-time long-range observation as well as advanced border protection, airports, and other public facilities.

The system uses electro-optical, light detection, and brain-inspired technologies to automatically recognize objects in ground and aerial surveillance environments. The computer vision algorithms integrated into UAVOS INC.'s optoelectronic onboarding unit gyro-stabilized gimbal is used for both object detection and tracking to monitor the earth's surface in the field of environmental protection, control of illegal logging activity, and volcanic activity.

https://uasweekly.com/2023/05/01/uavos-launches-new-ai-software-for-automated-object-recognition-and-tracking-in-the-security-industry/?utm_source=rss&utm_medium=rss&utm_campaign=uavos-launches-new-ai-software-for-automated-object-recognition-and-tracking-in-the-security-industry&utm_term=2023-05-01

DroneShield Provides Unmatched Security for IRONMAN Texas 2023 May 1, 2023 Counter UAS



DroneShield Limited, a leading **counter unmanned aerial systems (UAS) company**, is proud to announce that after placing a follow-on order, the Montgomery County Office of Homeland Security and Emergency Management deployed DroneShield's DroneSentry System for the IRONMAN Triathlon Championships 2023 in Woodlands, Texas for the second year in a row.

The [DroneSentry](#) system is a multi-sensor platform designed to provide warning and early identification of potential threats posed by unmanned systems.

The IRONMAN Championships is a high-profile event that draws athletes and spectators from around the world, and with the proliferation of drones, the risk to public safety has increased. The DroneSentry System provides real-time alerts to security personnel, enabling them to respond quickly to any potential threats posed by unmanned systems.

DroneShield's innovative solutions are increasingly relied upon by law enforcement, military, and security organizations worldwide to safeguard against the threat of rogue drones.



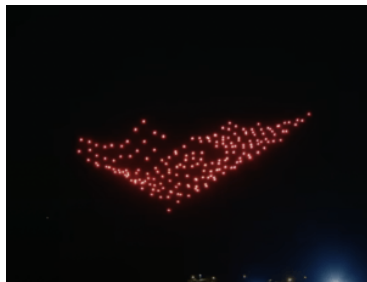
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https://uasweekly.com/2023/05/01/droneshield-provides-unmatched-security-for-ironman-texas-2023/?utm_source=rss&utm_medium=rss&utm_campaign=droneshield-provides-unmatched-security-for-ironman-texas-2023&utm_term=2023-05-01

2May23

Demonstrating the Commercial and Scientific Potential of Drone Show

Technology Miriam May 01, 2023 DRONELIFE Staff Writer Ian M. Crosby



Drone show provider [Sky Elements Drone Shows](#) has completed a unique scientific experiment with the use of SPH Engineering's [Drone Light Show Technologies](#).

The drone light show is part of an episode of "The Secret of Skinwalker Ranch", a TV series exploring the mysteries of a location with an extensive **history of unexplained phenomena**, such as UFO sightings, crop circles, and unexplained animal mutilations. The show's team of scientists and experts utilize leading technology, such as drones, to study and investigate these occurrences. The new episode, ["Who's Your Data,"](#) premiered this past Tuesday on The History Channel.



The episode focused on deploying a swarm of drones to discover aerial anomalies. The show's team invited Sky Elements Drone Shows to conduct a safer and more thorough scan using Drone Show Technology to collect data and research the anomaly in various areas in the ranch.

The company deployed their drones, normally used for light shows, to disperse over the Ranch's anomaly areas to watch illuminated formations against the night sky, making it easier to spot any changes in the pre-programmed patterns and locate the anomalies. The team from Sky Elements Drone Shows flew the illuminated swarm of 200 drones in a massive grid formation over the anomaly areas, allowing them to monitor the drones' exact position above the target areas. <https://dronelife.com/2023/05/01/demonstrating-the-commercial-and-scientific-potential-of-drone-show-technology-on-the-secret-of-skinwalker-ranch/>



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A Big Win for Drone Delivery in Florida: Legislation Will Smooth the Way for Drone Ports

Miriam McNabb May 01, 2023



Last Thursday, April 27, lawmakers in the Florida House voted unanimously to pass [SB 1068](#), designed to ease the way for drone delivery in Florida.

SB1068 is an addendum to Florida's [Unmanned Aircraft Systems Act](#), and is designed to **preempt local regulations** regarding the

development of drone delivery ports, infrastructure critical to operating drone delivery services at scale. Drone delivery ports such as those proposed by Walmart for their residential delivery services are not large structures, but a lack of definition, standards, and understanding about drone delivery infrastructure can lead to lengthy approval processes in some communities.

The new bill defines a drone port (under 1500 square feet, built in a non-residential area, and constructed in accordance with Florida state building codes) and exempts drone ports from compliance with certain fire codes (which don't reasonably apply to drone port structures.) In addition, the bill protects drone delivery companies and drone ports from local neighborhood restrictions. <https://dronelife.com/2023/05/01/a-big-win-for-drone-delivery-in-florida-new-legislation-will-smooth-the-way-for-drone-ports/>

Rain Aero Enables Remote Operation of Drones & Helicopters for Firefighting

Dan Parsons | May 1, 2023



Rain Aero, a California-based company using advanced aviation technologies to fight wildfires, has successfully equipped both a small rotorcraft drone and a full-sized Black Hawk helicopter with a kit that allows remote operation.

The company has plans to outfit a fleet of drones, based strategically where fires most often erupt around California, where they can be automatically alerted and remotely deployed to dispense fire retardant ahead of advancing flames, Rain's Chief Executive Maxwell Brodie said.

Rain just "put a wrap on" its smaller in-house platform, a small remotely operated single-main-rotor drone called the Mosquito. These aircraft are specifically designed to disperse fire



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retardant spray on the ground ahead of advancing fire lines, Brodie said. They are not big enough to operate in the high winds that often attend large fires and must operate too low to the ground for their downwash not to actually fan the flames while attempting to fight fires directly.

It also has integrated the remote piloting kit onto a Black Hawk, which already has flown—with safety pilots aboard—while being controlled by the company’s remote crew in Alameda, California. <https://www.aviationtoday.com/2023/05/01/rain-aero-enables-remote-operation-of-drones-helicopters-for-firefighting/>

Brazil’s Helisul Aviation to purchase 50 Moya eVTOL cargo drones April 26, 2023 Philip Butterworth-Hayes Cargo and logistics



Brazilian helicopter operator Helisul has announced it will buy 50 Moya eVTOL autonomous cargo drones. The all-electric drones have a payload capacity of **200kg and a range of 110km** and the prototype is due to fly before the end of 2023.

Humberto Biesuz, Helisul’s executive superintendent, said: “We believe the Moya eVTOL **will revolutionize** freight transportation with greater agility and productivity. Moya’s high load capacity and flight range are perfect for this type of mission. Not to mention that it is a clean flight, with zero carbon emissions.”

Alexandre Zaramela, CEO of Moya Aero said: “We designed the Moya eVTOL to meet a wide spectrum of logistics and agriculture uses. We aim to offer efficient cargo transportation with better economics and sustainable operation. It is **the first vehicle developed in Latin America** and a new means of logistics transportation.”

<https://www.urbanairmobilitynews.com/logistics/brazils-helisul-aviation-to-purchase-50-moya-evtol-cargo-drones/>



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Own the skies with this 2-pack of HD camera drones for \$149.99 DealPost Team MAY 1, 2023



If there was ever a doubt that cutting-edge drone technology has come to the masses, consider this deal on two top models from one of the nation's top producers: Right now, you can get two of Ninja Dragon's best models — the [Alpha Z PRO 4K](#) and [the Flying Fox](#) — for less than \$150.

Both these drones are satisfying to fly whether you're an old hand or just getting into the hobby.

Their 6-axis gyros keep them steady even in light winds and all it takes is one key to return them to their launch point. You can view real-time camera footage through a wi-fi connected phone, and you can expect it to be impressive. Both front cameras have 4K capability while the bottom cam provides a more panoramic view. See the movie:

https://www.macworld.com/article/1803842/own-the-skies-with-this-2-pack-of-hd-camera-drones-for-149-99.html?utm_date=20230501205957&utm_campaign=Macworld%20Daily&utm_content=Title%3A%20Own%20the%20skies%20with%20this%202-pack%20of%20HD%20camera%20drones%20for%20%24149.99&utm_term=Editorial%20-%20Macworld%20Daily&utm_medium=email&utm_source=Adestra&huid=0ca9c7a9-fd9c-4fca-8dd2-82138216bf71

Skyports' Scottish school meal delivery tapped for national award Bruce

Crumley | May 1 2023



A trial program overseen by the UK's [Skyports Drone Services](#) in Scotland is in the running for a national award for its efforts in pioneering UAV transport of meals to remote Highland schools.

Launched last June, the [Skyports-assisted](#) test project has been using drones to shuttle lunches from the town of Orban to the Lochnell Primary School about 1.5 kilometers north. Though still in its early evaluation stages, the scheme introduced by the local Argyll and Bute Council is the [first attempt in the UK to supply meals](#) for students in remote schools using UAVs.



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The governing Argyll and Bute Council has been exploring ways to use UAVs to overcome recurring challenges in serving its rural and island communities. Like several other administrations across Scotland, it has [begun testing drones](#) for [delivery of medical supplies](#), mail, and now school meals as a potential option to slow and disruption-prone road and sea transportation.

[Skyports](#) has been involved in many of those schemes, including one announced just last month to [provide delivery of post](#) for the [Royal Mail](#) within the Orkney islands. <https://dronedj.com/2023/05/01/skyports-scottish-school-meal-delivery-trapped-for-national-award/>

Partnership Brings Complete Airspace Visualization to BVLOS Drone Operators

Phoebe Grinter / 27 Apr 2023



[Kongsberg Geospatial](#), developer of the IRIS Terminal airspace deconfliction platform, has partnered with [Iris Automation](#) to provide visualization of intruder aircraft detections made by its ground-based Detect and Alert system (DAA), Casia G.

This facilitates Beyond Visual Line of Sight (BVLOS) UAS operations by providing situational awareness to remote pilots of potential air risks.

Iris Automation's [Casia G](#) system detects and identifies aviation traffic, both cooperative and non-cooperative, and displays their tracks seamlessly on Kongsberg's [IRIS Terminal](#).

This provides the BVLOS UAS operator with complete visibility of their operational airspace in real time, reducing their cognitive load and supporting their decision making.

When intruder aircraft are identified, Remote Pilots In Command (RPICs) can move their UAS to safe zones, ensuring safe and efficient execution of operations – without visual observers. The companies believe this functionality fulfills the airspace deconfliction requirements that drone operators need to comply with when conducting BVLOS operations.

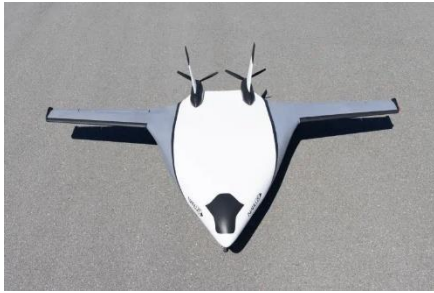
https://www.unmannedsystemstechnology.com/2023/04/partnership-brings-complete-airspace-visualization-to-bvlos-drone-operators/?utm_source=UST+eBrief&utm_campaign=285cb4623f-ust-ebrief_2023-05-02&utm_medium=email&utm_term=0_6fc3c01e8d-285cb4623f-119747501&mc_cid=285cb4623f&mc_eid=0d642a9d48



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Successful Flight of Autonomous Cargo Drone Prototype Validates Blended Wing

Body Phoebe Grinter / 26 Apr 2023



Autonomous cargo aircraft developer Natilus has successfully completed multiple flights of the subscale prototype of its Kona regional aircraft.

The flight tests mark a significant milestone for both the company and the autonomous cargo aircraft industry by validating wind tunnel tests conducted over three years, testing the aerodynamic performance of Natilus' unique

Blended-Wing-Body aircraft design.

The subscale prototype of the Kona aircraft took off from a private runway in Southern California and reached speeds of 70 mph. One of the key challenges with the BWB design has been stability – and the test flights validated that the Natilus configuration can fly without the help of a complex autopilot system.

Natilus is helping the air freight industry overcome the challenges brought about by the current shortage of pilots and has prioritized the development of innovative **remote piloting** technology, with the Kona prototype serving as a key component in correlating their own autopilot code for the full-scale demonstrator.

https://www.unmannedsystemstechnology.com/2023/04/successful-flight-of-autonomous-cargo-drone-prototype-validates-blended-wing-body-design/?utm_source=UST+eBrief&utm_campaign=285cb4623f-ust-ebrief_2023-05-02&utm_medium=email&utm_term=0_6fc3c01e8d-285cb4623f-119747501&mc_cid=285cb4623f&mc_eid=0d642a9d48

Agricultural eVTOL Authorized to Operate in the U.S. Sarah Simpson / 28 Apr 2023



Guardian Agriculture, a leading developer of Electric Vertical Take-Off and Landing (eVTOL) systems for commercial-scale sustainable farming, has received approval from the U.S. Federal Aviation Administration (FAA) to operate its eVTOL aircraft nationwide.

FAA approval makes Guardian Agriculture **the first** commercially authorized agricultural eVTOL in the U.S., allowing Guardian Agriculture to safely operate its



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systems across the country. With this approval, Guardian Agriculture expects to be **the first** eVTOL manufacturer with agricultural drone systems **operating at scale** within the U.S. and the first to generate **thousands of hours** of agricultural flight time.

The Guardian SC1 can carry 200-pound payloads and addresses a wide range of application spray volumes and application needs for growers. With **four six-foot propellers** and a 15-foot width, the SC1 efficiently covers **40 acres per hour** of full-field crop protection to the grower. https://www.unmannedsystemstechnology.com/2023/04/agricultural-evtol-authorized-to-operate-in-the-u-s/?utm_source=UST+eBrief&utm_campaign=285cb4623f-ust-ebrief_2023-05-02&utm_medium=email&utm_term=0_6fc3c01e8d-285cb4623f-119747501&mc_cid=285cb4623f&mc_eid=0d642a9d48

IAI \$100 Million Contract to Bring Airborne SIGINT Solutions to an International Customer May 2, 2023 Military | News



Israel Aerospace Industries (IAI) has announced that its subsidiary, ELTA Systems, has been awarded a contract worth over \$100 million to provide an international customer with airborne Signals Intelligence (SIGINT) solutions. The contract includes the delivery and maintenance of SIGINT systems and airborne communication suites for both manned and unmanned

aircraft.

The SIGINT capabilities of the systems are designed to handle complex signal formats in dense communications and electronic environments, and provide real-time intelligence to the customer on enemy activity and communications over a wide area. The systems are developed for Intelligence, Communications, and Electronic Warfare (EW), providing a full array of solutions for Electromagnetic Dominance.

IAI offers systems in the fields of SIGINT, EW systems for self-protection and electronic attack, communications systems, and multi-intelligence software. https://uasweekly.com/2023/05/02/iai-flies-high-with-100-million-contract-to-bring-airborne-sigint-solutions-to-an-international-customer/?utm_source=rss&utm_medium=rss&utm_campaign=iai-flies-high-with-100-million-contract-to-bring-airborne-sigint-solutions-to-an-international-customer&utm_term=2023-05-02

SnifferDRONE maker raises \$2M seed funding Ishveena Singh | May 2 2023



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Sniffer Robotics, whose SnifferDRONE methane leak detection system is **the only** drone-based solution approved by the United States Environmental Protection Agency for use at municipal solid waste landfill sites, has raised \$2 million in seed funding.

The funding round was led by Michigan Angel Fund and saw participation from Michigan Rise, Naruhisa Nakagawa (founder of Caygan Capital), and Abhishek Desai of Desai Ventures (London).

Founded in late 2016, Sniffer Robotics' SnifferDRONE is a patented and comprehensive drone-based solution that automates the hazardous and labor-intensive methane emission monitoring method where technicians walk miles to manually inspect landfills and natural gas pipelines.

The [US EPA recently recognized](#) the benefits of Sniffer's technology and said that the SnifferDRONE method of monitoring landfill methane emissions can be utilized as an alternative to existing federal regulations with [certain limitations](#).

Sniffer says its system is now being used throughout the United States assisting sites to more accurately account for methane leaks, enhance gas collection, and reduce odors, and it will use the fresh funding to develop the product further and expand its reach.

<https://dronedj.com/2023/05/02/snifferdrone-gas-methane-leak-funding/#more-92983>

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A2Z Launches the RDSX Pelican Long Distance Delivery Drone DRONELIFE Staff Writer

Ian M. Crosby Miriam McNabb May 02, 2023



The [RDSX Pelican](#) features a hybrid VTOL airframe without control surfaces, combining the stability of a multirotor platform with the long range of a fixed wing craft. The new drone will be displayed for the first time at [AUVSI XPONENTIAL](#) in Denver, Colorado from May 9th-11th.

The Pelican is available in several model variations and can be customized for a wide range of missions. Optimized with the A2Z Drone Delivery [RDS2 drone winch](#), the Pelican features a 45 knot cruising speed; a Max Payload Capacity of up to **7-8 kg**; a Max Range of **50 km** with no payload and of 40 km with a 5 kg payload; a 55lb. max takeoff weight; and an operational cost of 13 cents per kilogram per kilometer. The Pelican does not require specialty delivery boxes,



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and is able to accept any shape payload with dimensions up to 400 x 300 x 300mm. Its payload auto-release mechanism can deposit a box without a human receiver, and it can retrieve payloads up to 5 kg while hovering at a safe altitude. It also features A2Z 4G Link, a General-Purpose Payload Hook, Passive Payload Lock, Tether Abandonment, A2Z Ground Control Station, and an Intuitive Flight Controller.

Starting at **\$29,000**, the RDSX Pelican comes in a range of model variations suited to different use cases. <https://dronelife.com/2023/05/02/a2z-launches-the-rdsx-pelican-long-distance-delivery-drone/>

Mexico's Redwings Plans eVTOL Air-taxi Services Charles Alcock May 1, 2023



Business aviation service group Redwings has announced plans to launch eVTOL air-taxi services, starting in Mexico City. The company signed a non-binding letter of intent to buy up to **20** of the four-passenger Journey vehicles being developed by Jaunt Air Mobility, starting with 10 units and with options for 10 more.

The aircraft, which features both a fixed wing and a rotor, uses the company's patented **slow-rotor compound technology**, which reduces drag and vibration by lowering the speed of the main rotor to about 10 rpm during cruise flight. Jaunt aims to complete type certification under Transport Canada Part 529 requirements in 2027 and expects the aircraft to have a maximum speed of 175 mph on flights of up to around **100 miles**.

"The elevation of Mexico City is **7,349 feet, higher than Denver**, Colorado, and presents challenges for many VTOL aircraft operating at this altitude," said Redwing president Bernardo Moreno. "The Journey's highly efficient vertical flight capability enables this aircraft to operate at altitude with no performance limitations." <https://www.ainonline.com/aviation-news/business-aviation/2023-05-01/mexicos-redwings-plans-evtol-air-taxi-services>

AeroVironment awarded \$10 Million contract for two helicopters for Mars sample return 2 May 2023 Press



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[AeroVironment, Inc.](#) (NASDAQ: AVAV) has been awarded a \$10 million contract by NASA's Jet Propulsion Laboratory (JPL) to co-design and co-develop conceptual designs and engineering development units of [Mars Sample Recovery Helicopter](#) flight systems. The helicopters are built on the Ingenuity Mars Helicopter design heritage and feature upgraded robotics to supplement

aerial mobility.

AeroVironment engineers from the MacCready Works team previously worked with NASA JPL to co-design and develop the [Ingenuity Mars Helicopter](#), which has completed 52 successful flights to date on Mars and survived 781 sols on the surface, far outperforming its design objectives.

The two planned Sample Recovery Helicopters would be a secondary method of sample retrieval for the NASA/ESA Mars Sample Return Campaign. NASA's Perseverance rover, which has already been collecting a diverse set of scientifically selected samples for potential safe return to Earth, is currently planned as the primary method of delivering samples to the [Sample Retrieval Lander](#). <https://www.suasnews.com/2023/05/aerovironment-was-awarded-10-million-contract-by-nasa-jpl-to-co-design-and-develop-two-helicopters-for-mars-sample-return-mission/#:~:text=AeroVironment%2C%20Inc.,Sample%20Recovery%20Helicopter%20flight%20systems>.

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Medical Drone Delivery Pioneer Zipline Valuation Rises to \$4.2 Billion Miriam

McNabb May 03, 2023 by DRONELIFE Staff Writer Ian M. Crosby



As reported by [Forbes](#), drone delivery startup [Zipline](#) is currently raising \$330 million in a new funding round.

A filing in Delaware on April 10 revealed the Series F funding round, which priced Zipline at \$40.20 per share. This funding values the company at roughly \$4.2 billion, approximately a 55% increase over its \$2.7 billion valuation from two years prior. Also detailed in the filing was a Series F-1 extension of up to \$20 million which could still be rolled into the round, potentially changing the exact total raised. A lead investor has yet to be identified.



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“We recently closed our Series F funding round at an increased valuation, which involved several new and existing investors,” said a statement from Zipline. “We are well capitalized to continue to grow our operations, including launching our new home delivery service.

This news follows the recent announcement of Zipline’s new autonomous drone, the [Platform 2](#). The new drone can carry eight pounds of cargo at a range of 10 miles and is able to charge on a docking station resembling a lamppost. Zipline has also announced new partnerships with food chain Sweetgreen, Michigan Medicine and several other health systems.

The company’s growth is in large part due to its activities in Africa. Zipline began deploying its autonomous delivery drones in Rwanda in 2016 before expanding to Ghana, where it saw major success delivering blood and Covid-19 vaccines during the early months of the pandemic.

The company is currently active in [Arkansas, North Carolina, and Utah](#) in the U.S. as well as in [Cote d’Ivoire, Japan, Kenya, and Nigeria](#). <https://dronelife.com/2023/05/03/drone-delivery-pioneer-zipline-valuation-rises-to-4-2-billion/>

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The Latest Advancements in UAS John Pullen | May 4, 2023

In recent years, the world has seen a rapid rise of uncrewed aircraft systems (UAS). While it started as a small sector of the aviation industry, its popularity and relevance across a variety of disciplines has fueled its growth to a mainstream concept. In recent months, UAS has appeared in countless headlines, illustrating the versatility that this technology offers for different industries across the world.

The progress UAS has made would not be possible without some degree of acceptance from regulatory bodies. Governments across the world have adjusted legislation and granted approval for a variety of drone-based projects designed to improve efficiency and convenience for various stakeholders. For example, Reno-based operator Skydrop recently received Part 102 approval from New Zealand’s Civil Aviation Authority to [launch a delivery drone hub](#) in Huntly, New Zealand. Also operating some beyond visual line of sight (BVLOS) operations, the company is [the first store-to-door drone delivery](#) to receive approval in New Zealand.



Drone developers and operators have made some key announcements in recent months, demonstrating progress from Chile and New Zealand to China and beyond. (Photo: Skydrop)



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In some areas of the world, like China, drone regulations are already designed to encourage innovation and experimentation with UAS. In recent months, A2Z Drone Delivery Inc., a company dedicated to developing drone delivery technology, announced its plan to expand its test facility in Anji County near Shanghai, China. A2Z is just one of many developers making progress on UAS ambitions: others, like Zipline, have already unveiled new, completely autonomous systems for delivery.

While testing in China, A2Z believes the information it receives and adjustments it makes during the technology's trial run in Anji County will allow it to create a product better suited for the rest of the world. As Aaron Zhang, founder of A2Z Drone Delivery, explained, "To truly push the boundaries of autonomous unmanned drone delivery our development team needs to be able to test our latest delivery drone systems under real-life conditions. As the US regulations expand to compete with those in operation around the world, we will be ready to take to the skies with the most cutting-edge systems that have been proven safe, reliable, and economical thanks to the testing and delivery missions we are able to do in Anji right now."

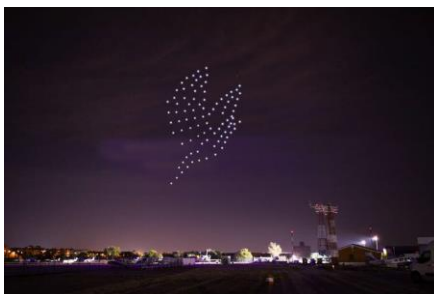
In the past week, A2Z also announced the rollout of the RDSX Pelican, its new flagship long-range delivery drone. It's a hybrid VTOL (vertical take-off and landing) model, and initial deliveries are expected to start in June.



"The new Pelican leverages a hybrid VTOL airframe with no control surfaces to combine the reliability and flight stability of a multirotor platform, with the extended range of a fixed wing craft." (Photo: A2Z)

A2Z Drone Delivery launched a new integrated cargo drone and a second-generation [delivery winch system](#) last summer. A2Z's CEO Aaron Zhang told *Avionics*, "We've been working on this delivery winch as our core product."

Implementation of UAS extends beyond delivery. In fact, some agencies are using it to replace traditional means of entertainment. Because of this new demand, UMILES, which operates a line of drone light shows, has just announced an [expansion into Chile](#). The company's service involves choreographing over 200 drones to create eye-catching demonstrations in the sky.



"Since the new European regulation on UAS came into effect in January 2021 there has been a steep increase in demand,



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and Drone Light Show already has more than 30 shows in the pipeline for 2023." (Photo: UMILES)

Often seen as a cleaner and safer alternative to firework shows, UMILES has over 30 shows planned for 2023 already, mainly for private businesses and local agencies.

https://www.aviationtoday.com/2023/05/04/the-latest-advancements-in-uas/?oly_enc_id=7021F0632090D7B