



UAS and SmallSat Weekly News

Contents

- 2 Airwards Drone Contest Soars into Second Year
- 2 General Atomics Receives \$103M Army UAS Production Contract
- 3 Samad Aerospace signs MOU with Aerosud Aviation
- 3 Zipline starts first commercial US drone deliveries with Walmart partnership in Arkansas
- 4 Air Force Research Lab Selects Tyvak for Ionosphere Research Spacecraft Development
- 5 DroneShield Wins Department of Defence Artificial Intelligence Contract
- 5 French water companies flying drones for sewer inspections
- 6 Joby Says It's Certifying as A Traditional Aircraft
- 7 Volatus, Avidrone partner in global drone cargo delivery offer
- 8 Taxi! To the Airport — by Air, Please
- 9 Meet LICIAcube, the small spacecraft that will watch NASA's epic DART asteroid crash
- 10 XTEND Funding: \$20 Million Raise for Human-Guided, AI-Operated Drone System
- 11 US Drone Deployer Makes Waves with UK Flight Control Avionics
- 12 Flytrex raises \$40M to offer drone delivery across US suburbs
- 13 Tucson police chase of mystery drone in Feb. mirrored 2016 incident
- 14 Latest Drone Industry Insights report projects 71.1% CAGR for BVLOS operations
- 14 Dubai launches new program to boost drone transportation
- 15 Jetex, Eve Partnering on eVTOL Ecosystem
- 15 WALMART DRONE DELIVERY PROJECT TAPS ZIPLINE AS ANOTHER PARTNER
- 16 SVT Robotics Announces Completion of a \$25M Series A funding round
- 17 Stratospheric HAPS UAV Achieves Connectivity
- 18 Unmanned Helicopters: Alpha 900 Flying with Greek Navy
- 18 Elroy Air, Ayr Logistics ink drone humanitarian aid delivery deal
- 19 CHECK OUT THIS MOBILE, ELECTRIC DRONE COMMAND CENTER
- 20 Skyports to build Europe's first trial eVTOL vertiport near Paris
- 21 WHATEVER HAPPENED TO THE WALMART DRONEUP INVESTMENT?



UAS and SmallSat Weekly News

20Nov21

Airwards Drone Contest Soars into Second Year Jason Reagan November 17, 2021



Soaring on the [success of its inaugural flight](#), a major global drone awards contest has been given clearance for takeoff. Described as a “program dedicated to recognizing positive drone use cases from around the world,” Britain-based [Airwards](#) launched last year to overwhelming success—garnering nearly 200 entries from 23 countries. The group’s 2021-22 showing promises to fly even higher, with categories to include: Technology, Operations, Supporting Services, Industries/Fields and Giving Back, in addition to a People’s Choice section.

“From life-affirming conservation work and lifesaving projects to pure innovation and groundbreaking tech, Airwards is the **first awards program** to recognize the breadth of drone work being carried out **around the world**,” an Airwards spokesperson stated in a press release.

For 2021-22, Airwards will feature new People’s Choice categories. Described as celebrating “companies of varying scales as well as individuals impacting, disrupting or rising within the drone industry,”

Registration to Airwards are free and open beginning Dec. 1 to Jan. 2022. The entry process includes a quick-fire qualifying round and a second round to determine a shortlist, followed by the winner announcements during Airwards’ Winners Week in May.

<https://dronelife.com/2021/11/17/airwards-drone-contest-soars-into-second-year/>

General Atomics Receives \$103M Army UAS Production Contract ANGELINE LEISHMAN NOVEMBER 19, 2021 CONTRACT AWARDS,NEWS



[General Atomics](#)’ aeronautical systems business has received a two-year, \$103.2 million contract to manufacture MQ-1C Gray Eagle [unmanned aircraft systems for the U.S. Army](#).

Under the firm-fixed-priced contract, the company will also provide satellite airborne data terminals to the military branch and maintain government-furnished equipment. Work will take place at a General Atomics Aeronautical Systems Inc. facility in Poway, California.



UAS and SmallSat Weekly News

Army Contracting Command received one bid via an online solicitation and expects contract services to be complete by Dec. 31, 2023. The service branch currently uses [Gray Eagle](#) drones to perform combat and special operations as well as intelligence and security missions.

<https://www.govconwire.com/2021/11/general-atomics-receives-103m-army-uas-production-contract/>

Samad Aerospace signs MOU with Aerosud Aviation November 18, 2021 Chris Stonor Business Partnerships



Samad Aerospace announced this week it has signed a Memorandum of Understanding agreement with Aerosud Aviation for the development and manufacturing of its fully electric VTOL Starling Cargo Aircraft.

“Aerosud Aviation,” says the release, “is a **South African** Aerospace Engineering company specializing in commercial aerostructure part design and manufacturing for international Tier 1 suppliers.”

The Starling Cargo aircraft is to be remotely piloted with auto pilot capability. It will have a cruising speed of 83 knots, flight ceiling of 10,000 ft and a range of up to 117 nm. An eVTOL enables flexible point to point air cargo of up to 60 kg payload.

Rob Jonkers, director of programs at Aerosud Aviation, remarked, “We look forward to working with Samad Aerospace to bring to market this unique Starling Cargo eVTOL which has particular advantages in the South African and African regions given the sparse infrastructure to move cargo at medium to long distance at speed.” <https://www.urbanairmobilitynews.com/business-partnerships/samad-aerospace-signs-mou-with-aerosud-aviation/>

Zipline starts first commercial US drone deliveries with Walmart partnership in Arkansas James Vincent Nov 18, 2021 *It's an extremely limited service though*



Walmart and drone delivery company Zipline are launching a delivery service in Pea Ridge, Arkansas — **the first commercial drone delivery service offered by Zipline in the US**. Customers will be able to choose from “thousands of products,” though are restricted to health and wellness items like “over the counter allergy medicine, bandages, ibuprofen.”



UAS and SmallSat Weekly News

The project's launch shows there's continuing belief in the potential of drones to perform commercial deliveries. But the technology's slow rate of adoption and the lack of large-scale implementations (the Pea Ridge service only covers a 50-mile radius) also shows there are plenty of questions to be answered if drone deliveries are to become commonplace for regular consumers.

To date, Zipline has mostly proven its mettle in healthcare, delivering [medical supplies in North Carolina](#), [blood in Rwanda](#), and [COVID-19 vaccines in Ghana](#). Here, the economics of deliveries are better suited to the expenses of the technology. Vaccines and blood samples are small, valuable, and benefit greatly from speedy delivery. Walmart is Zipline's first commercial partner, and it's not clear if the economics of drone delivery are as convincing for customers who want on-demand diapers and non-prescription medication.

For Walmart, drones may help it plug gaps in its delivery network, **particularly in rural communities** that aren't well served by traditional infrastructure. Drones, of course, don't need roads or highways, and Zipline's aircraft make delivery by parachute, avoiding the need for customers to have designated landing zones. There are other hurdles, of course, including regulatory ones, though Zipline was granted a waiver of certain FAA restrictions on drones [earlier this year](#), which cleared the way for the Walmart partnership. <https://www.theverge.com/2021/11/18/22786919/walmart-zipline-drone-delivery-commercial-service-arkansas>

Air Force Research Lab Selects Tyvak for Ionosphere Research Spacecraft

Development Angeline Leishman November 18, 2021 Contract Awards, News, Space



[Tyvak Nano-Satellite Systems](#) has received a contract from the Air Force Research Laboratory to build [spacecraft for a flight experiment](#) that could take place in 2024 to study ionization processes in very low Earth orbit. Under the three-year contract, Tyvak will aim to produce a space vehicle equipped with sensor payloads to support AFRL's Precise mission, the laboratory said Wednesday.

"The Precise spacecraft will use sensitive satellite instruments and radio waves to examine changes in the ionosphere resulting from different compositions of ion source gasses," Rachel Hock-Mysliwiec, an AFRL program manager. "This understanding could be used in the future to mitigate natural ionospheric impacts to warfighter systems such as satellite communications and GPS."



UAS and SmallSat Weekly News

“Having this new agreement will permit us to move at an expedited pace, allowing our scientists and engineers to concentrate on matters inside the lab, rather than spending time working on contracting matters,” Della Silva added.

<https://www.executivegov.com/2021/11/tyvak-to-develop-spacecraft-for-air-forces-ionosphere-research/>

DroneShield Wins Department of Defence Artificial Intelligence Contract

November 19, 2021 Counter UAS



DroneShield Ltd is pleased to share the announcement from the **Australian** Minister for Defence Industry, the Hon Melissa Price MP, that DroneShield has been selected for a Phase 2 (prototyping) Defence Innovation Hub Contract, as part of a \$10 million Artificial Intelligence grant round.

The project is valued at approximately **\$800,000** and leverages two core elements of DroneShield’s technology base: Artificial Intelligence/Machine Learning in the Computer Vision space, and the Command-and-Control system.

DroneShield will examine autonomous AI-enabled computer-vision search, track, and classification techniques with a focus on **multi-sensor fusion**, beyond traditional sensor “correlation”. The combination of advanced computer-vision and sensor fusion allows automatic generation of target data for future use – an essential part of the Intelligence Mission Data cycle for defence, Government agency and similar customers.

This technology stream has direct application in both the C-UAS space and military/Government agency applications. https://uasweekly.com/2021/11/19/droneshield-wins-department-of-defence-artificial-intelligence-contract/?utm_source=rss&utm_medium=rss&utm_campaign=droneshield-wins-department-of-defence-artificial-intelligence-contract&utm_term=2021-11-19

French water companies flying drones for sewer inspections Bruce Crumley - Nov. 19th 2021



Water services companies that dominate the sector in France face a dilemma. A recent law requires all major cities to inspect their wastewater infrastructure by 2026, creating a crushing demand for operators of those thousands of kilometers of sewer networks to get the work done in time. To



UAS and SmallSat Weekly News

meet that challenge, sector giant [Suez](#) has turned to drones.

The main company vehicle for the work is a cage-anchored [Flyability Elios 2](#), which is flown with tethers to facilitate video and other data flows back to the pilot and monitoring computers. Deployment of the UAV not only spares human inspectors from having to wriggle into cramped, slippery, possibly dangerous, and generally yucky sewer spaces it also considerably speeds up their progress as the legal clock ticks for the work to be completed.

Suez personnel using traditional methods can inspect between 1,312 to 1,968 feet of wastewater network per day. An Elios 2 ups that daily rate to 2,952 feet, which – depending on the site – can represent **speed enhancements from 50% to 100% each shift**.

Piloting the craft in a cage not only protects the Elios 2 during bumps or harder collisions with surrounding structures. It's also a safeguard against damaging parts of the underground systems still made of decades, possibly century-old, stone blocks whose continued aging in corrosive conditions is a focus of inspections in the first place.

<https://dronedj.com/2021/11/19/french-water-companies-flying-drones-for-sewer-inspections/#more-71990>

Joby Says It's Certifying as A Traditional Aircraft Paul Bertorelli November 17, 2021



Joby Aviation, an electric aircraft manufacturer that envisions a zero direct-emissions aerial ride-sharing network, says to speed FAA approvals, it will certify the aircraft as a traditional airplane rather than a multicopter.

Company founder Joe Ben Bevirt has famously said his goal is to save one billion people an hour a day by substituting quiet air taxis for surface transportation. To do that, says the company, they plan to certify the Joby eVTOL as an airplane, not as a new or special category.

"Certifying as a special category means you are starting from scratch across the board," says Greg Bowles, Joby's head of government and regulatory affairs. "Our aircraft is designed to be flown in today's system with the ability to adapt to evolve into a future system. From a size, scale, and weight perspective, we fit into Part 23. We can glide on the wing, we can take off and land from runways like a conventional airplane, we have airplane-like pilot controls and we've designed our aircraft to meet all the performance and structural requirements of an airplane," he explains.



UAS and SmallSat Weekly News

The company says it has reached agreement with the FAA on a certification path and is now in discussions about how to move forward with the actual testing toward a planned entry into commercial operation in 2024. https://www.avweb.com/aviation-news/joby-says-its-certifying-as-a-traditional-aircraft/?MailingID=775&utm_source=ActiveCampaign&utm_medium=email&utm_content=NTSB+Finds+Fatal+Accidents+Decrease+In+2020%2C+Joby+Says+It+s+Certifying+As+A+Traditional+Aircraft&utm_campaign=NTSB+Finds+Fatal+Accidents+Decrease+In+2020%2C+Joby+Says+It+s+Certifying+As+A+Traditional+Aircraft+-+Friday%2C+November+19%2C+2021

20Nov21

Volatus, Avidrone partner in global drone cargo delivery offer Bruce Crumley - Nov. 19th 2021



Integrated drone services company Volatus [says](#) it is teaming up with uncrewed aerial systems producer Avidrone Aerospace to offer clients autonomous cargo drone delivery services in markets **around the world**.

Under the deal, Volatus will assume worldwide distribution rights for Avidrone aircraft, including those in the stable of UAVs the company offers to clients as part of its full range of UAS services. Initially, Volatus will angle its work with Avidrone craft toward clients with cargo drone delivery needs, particularly businesses with relatively larger payloads to haul. That plays into Avidrone's [innovative freight](#) vehicles, which can transport goods ranging **from 5 lbs. to 50 lbs. over distances of up to 100 miles**.

At first glance, the pairing seems a quicker fit for industrial, construction, military, or government customers with specific drone cargo operation needs. Those focused missions often involve quicker authorization and other flight clearance procedures with civil aviation authorities than open-ended commercial deliveries of packages or food offered by companies like Wing and [Zipline](#). While neither partner is forswearing developing that latter activity as it grows to what some estimates expect to be a **\$4.40 billion global market by 2025**, they'll initially give priority to enterprise drone demand where it's strongest and in need of integrated solutions.

Canada's Volatus offers services spanning aerial inspections, mapping, survey, and imaging, to training, consultancy, and instruction in obtaining certification for a variety of drone flight



UAS and SmallSat Weekly News

modes – from basic piloting to [beyond visual line of sight](#) operation. In addition to selling a wide selection of craft and sensors for use by customers, the company also provides UAV servicing; data processing and management; systems design engineering; and research, development, manufacturing, testing and commercialization work for emerging technologies.

Now added to those will be the marketing, flight instruction, and mission optimization of Avidrone's **elongated, dual-rotor cargo drones** that deliver critical supplies like medicine, tools, and parts to remote or difficult to access destinations. <https://dronedj.com/2021/11/19/volatus-avidrone-partner-in-global-drone-cargo-delivery-offer/#more-72025>

22Nov21

Taxi! To the Airport — by Air, Please. Gautham Nagesh Nov. 22, 2021



The new electric aircraft use one-fifth the energy of conventional helicopters. Unlike traditional fixed-wing aircraft, they won't require runways to take off and land. Unlike helicopters, they will be largely inaudible from the ground and have multiple rotors and backup systems, making them much safer. Adam Goldstein, the co-chief executive of [Archer Aviation](#), said his company hopes to offer fares in the range of three to four dollars per mile traveled. That would make the trip from Manhattan to Kennedy, typically 17 miles, between \$50 and \$80.

Volocopter, founded in 2011 and based in Munich, has two vehicles in advanced development including a "multicopter," with 18 rotor blades, called the VoloCity. Volocopter is also developing a four-seat aircraft with a 100-mile range aimed more at regional travel. Volocopter is pursuing regulatory approval with the European Union Aviation Safety Agency and hopes to have its aircraft in operation by 2024.

[Joby](#), based in Santa Cruz, Calif., is pursuing a similar goal using yet another approach, having flown over 1,000 test flights on its fully electric aircraft which seats four passengers plus the pilot and has a range of 150 miles on a single charge. The company made headlines last December when the ride-sharing giant Uber offloaded Elevate, their urban air travel ride-sharing product, to Joby and invested an additional **\$75 million** into the company, signaling that the two services would be seamlessly linked.



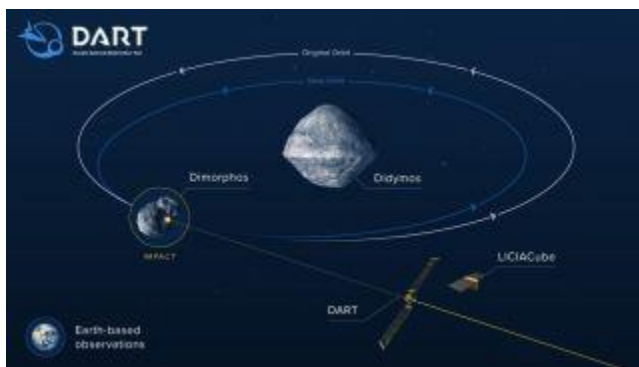
UAS and SmallSat Weekly News

Sam Morrissey, the executive director of Urban Movement Labs, said the aircraft initially will likely be confined to existing commercial airports and flight paths until officials are able to determine how the new locations for takeoffs and landings can be added without disrupting other modes of transport. (Joby and Archer have both begun certification under rules for existing fixed-wing aircraft.) <https://www.nytimes.com/2021/11/22/business/air-taxi-aviation-electric.html>

Meet LICIACube, the small spacecraft that will watch NASA's epic DART asteroid crash

Doris Elin Urrutia 3 days ago

Italy's small LICIACube satellite will separate from NASA's DART spacecraft 10 days before the larger spacecraft is scheduled to strike the asteroid Dimorphos.



The Double Asteroid Redirection Test (DART) mission led by the John Hopkins' Applied Physics Laboratory will crash into Dimorphos, changing its orbit around the larger asteroid Didymos. Italy's first-ever deep space mission will use its LUKE and LEIA optical cameras to watch the rendezvous.

NASA and international agencies are coming together in the name of planetary defense. The [Double Asteroid Redirection Test](#) mission led by the John Hopkins' Applied Physics Laboratory is the first mission for this project. If all goes as planned, NASA's DART spacecraft [will launch early Wednesday](#) (Nov. 24) to reach a pair of near-Earth asteroids late next year.

DART's mission is simple: self-destruct by smashing into the smaller of the two space rocks, hopefully changing that object's orbit. But in order for scientists to see whether this novel collision tweaked the speed of the [asteroid](#) — which would carry major planetary defense implications for the future — a small satellite with Star Wars-inspired camera names will collect data from the sidelines. That [cubesat](#) is Italy's first deep-space mission, called [LICIACube](#). <https://www.space.com/dart-mission-cubesat-first-italian-deep-space-mission>



UAS and SmallSat Weekly News

XTEND Funding: \$20 Million Raise for Human-Guided, AI-Operated Drone

System Miriam McNabb November 19, 2021 by Ian M. Crosby



Today, [XTEND](#), a human-guided, AI-operated drone system enabling operators to undertake complex missions more safely, has announced it has raised \$20 million in equity financing as part of its Series A fundraising round. Chartered Group led the round, with participation from early investors such as lool ventures, I3 Equity Partners, TPY Ventures, TAU Ventures, Surround Ventures, Homeward Ventures, NFX and Top Ventures. This XTEND funding will allow the company to meet high demand, enhance its market traction with new and existing customers, and expedite the development of its new generation Drone Operating System for autonomy and multi-drone applications in the defense and commercial sectors.

XTEND, founded in 2018 by Aviv and Matteo Shapira, developed a unique and patented Drone Operating System called XOS, as well as platforms that combine human judgement and edge-based Artificial Intelligence to allow for next level man-machine teaming. XOS, controlled through a Virtual Reality interface, makes use of advanced Augmented Reality & Artificial Intelligence technology and allows operators to immerse themselves in remote, high-risk, GPS-denied locations, all at a minimal risk. <https://dronelife.com/2021/11/19/xtend-funding-20-million-raise-for-human-guided-ai-operated-drone-system/>

Walmart and DroneUp Announce First Multi-Site Commercial Drone Delivery Operations



The retailer is launching three full-time DroneUp airport “Hubs” for on-demand delivery operations. The first operation has already taken flight at a Walmart Neighborhood Market in Farmington, Arkansas.

Virginia Beach, Va., and Bentonville, Ark., November 22, 2021 – [DroneUp, LLC](#), a leading global provider of drone technology and services, and Walmart announced today the first multi-site commercial drone delivery operations. The three locations, which will be located at Walmart stores in Northwest Arkansas, will operate from 8:00 a.m. — 8:00 p.m. seven days per week to deliver items to eligible Walmart customers by air in as little as **30 minutes**.



UAS and SmallSat Weekly News

“When we invested in DroneUp earlier this year, we envisioned a drone delivery operation that could be quickly executed and replicated across multiple stores,” said Tom Ward, senior vice president of last-mile at Walmart U.S. “Opening our first hub within months of our initial concept showcases DroneUp’s ability to safely execute drone delivery operations with speed. We’re already hearing great customer feedback at our first site in Farmington, Arkansas, and look forward to opening additional locations.”

DroneUp’s delivery operation provides Walmart customers a safe, convenient, fast, and sustainable delivery option on thousands of items – even the most fragile – powered by a crew of skilled operators. Enjoying the benefits of drone delivery is as easy as:

Verify: Customer enters their address to verify eligibility.

Shop: Customer selects from thousands of items for delivery.

Secure: Operators pack the order and secure the box to the drone using a patented delivery release mechanism.

Deliver: The flight engineer manages a controlled and guided delivery, placing the order gently at the customer’s home.

Eligible customers in Farmington, AR can begin placing orders **today** at droneupdelivery.com.

The additional locations at Walmart Neighborhood Market in Rogers, AR and Walmart Supercenter in Bentonville, AR, are planned to open in the coming months. Contact: Amy Wiegand 757-657-4886 pr@droneup.com

US Drone Deployer Makes Waves with UK Flight Control Avionics November 22, 2021 News



Following a tremendous year of positive movements in the UAV industry, Sky-Drones Technologies and Full Throttle Aerial have made the motion to partner. The US-made units will be named FTA AIRLink and used in Full Throttle Aerial’s extensive fleet of UAVs. Sky-Drones are designers, developers, and manufacturers of full-stack flight control for drones. They serve a mixture of sectors including security and defense, public safety, logistics, and enterprise. Their latest research and development efforts have given rise to AIRLink, the most advanced **AI flight control** in the industry to date.



Full Throttle Aerial is a US-based innovator when it comes to manned and unmanned cargo aviation. Redefining the term “heavy lifting”, the organization was the first to fly a UAV

Robert Rea | Axcel Innovation | Suffolk, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.net



UAS and SmallSat Weekly News

carrying over **1,000 pounds** in payload weight. Their latest motion becomes aligned with Sky-Drones Technologies to continue providing to leading minds in the industry such as NASA, DOD and AT&T.

Sky-Drones provides hardware manufactured in the UK. Their avionics range from autopilot and flight control hardware to ground control and cloud analytics software using computer vision object recognition. As a result of the partnership, AIRLink by Sky-Drones becomes primary avionics for Full Throttle Aerial drones, providing the US giant's UAVs artificial intelligence, drone autopilot, and LTE connectivity. They are providing ready-to-fly solutions offered by a Texas-based, veteran-owned organization. https://uasweekly.com/2021/11/22/us-drone-deployer-makes-waves-with-uk-flight-control-avionics/?utm_source=rss&utm_medium=rss&utm_campaign=us-drone-deployer-makes-waves-with-uk-flight-control-avionics&utm_term=2021-11-22

Flytrex raises \$40M to offer drone delivery across US suburbs Ishveena Singh - Nov. 22nd 2021



Flytrex's delivery drones can carry a 6.6-pound payload for 3.5 miles and back at a speed of 32 mph.

The [Israeli startup](#), which has raised **\$60 million in total funding to date**, has most recently launched its **third drone delivery station in North Carolina**. The company further claims that the volume of its [food delivery orders across North Carolina](#) has increased more than tenfold since February 2021.

Yariv Bash, CEO and cofounder of Flytrex, says: On-demand drone delivery has skyrocketed since the pandemic began and is becoming more mainstream much faster than expected. We're excited to continue working with the FAA, the North Carolina Department of Transportation, and others to bring swift, affordable, and sustainable on-demand drone delivery to more partners, communities, and consumers across the country.

The company's latest funding round was led by BRM Group with participation from OurCrowd, Lukasz Gadowski (founder and chairman at Delivery Hero), and includes existing investors Benhamou Global Ventures (BGV), btov, and BackBone Ventures.

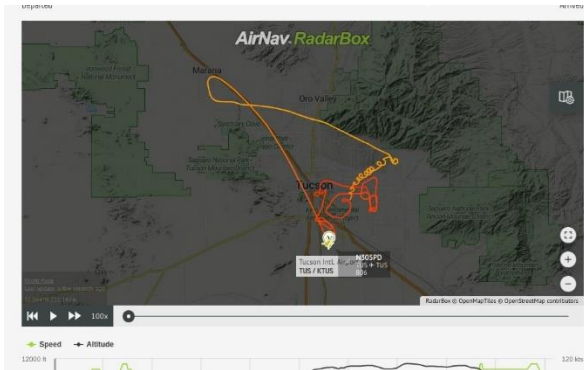
<https://dronedj.com/2021/11/22/flytrex-series-c-drone-delivery/#more-72107>



UAS and SmallSat Weekly News

Tucson police chase of mystery drone in Feb. mirrored 2016 incident Bruce

Crumley - Nov. 22nd 2021



Since it was first [acknowledged](#) by FBI officials in May, the new input comes from *The Drive's* [War Zone](#) reporter Brett Tingley. Using Freedom of Information Act requests for archived Air Traffic Mandatory Occurrence Reports, Tingley discovered that a strikingly similar police chase of an eerily comparable mega-drone was filed in 2016 in virtually the same area around Tucson's Davis-Monthan Air Force Base. In both cases, a

UAV with a single flashing green position light attained remarkable speeds and altitude levels to leave chasing helicopters in its dust before vanishing.

In February, that occurred after a drone nearly collided with a Customs and Border Patrol helicopter above Tucson before 11 p.m. A serpentine, 70-mile pursuit then ensued for over an hour at speeds exceeding 100 mph, and altitudes of up to 14,000 feet. Despite being joined by a Tucson Police helicopter, pilots never got a decent look at the craft as it buzzed around them in what one officer described as a nose-tweaking evasive display of agility and speed before it dashed off into a cloud bank.

The 2016 incident records detail an ambulance helicopter's December 26 report of a drone flying about 100 feet below its own 1,000 foot altitude. The encounter occurred just before 11 p.m. As happened this year, a Tucson Police chopper was dispatched to help track the craft, which – like the one in February – repeatedly changed altitude as it ditched chasing authorities. The report describes it, too, as being “lit by a green position light and was of rotor variety.”

Both incidents occurred near DMAFB – a restricted airspace that the February drone returned to repeatedly as it zigzagged away from official aircraft on its tail. Both events ended when the enigmatic UAV involved zipped off to the west of Tucson's city limits. Both began at roughly the same time: 10:46 p.m. this year, and 10:58 p.m. in 2016. And just to make the similarities really unnerving, the Tucson Police helicopters scrambled to join in those chases over four years apart.

War Zone notes that its own [UAV Geography tool](#), which compiles FAA UAV incidence reports between 2015 and 2020, registers **32** of those strange sightings in the same area of Tucson where the two mystery craft put on their show. Meaning either the restricted airspace over

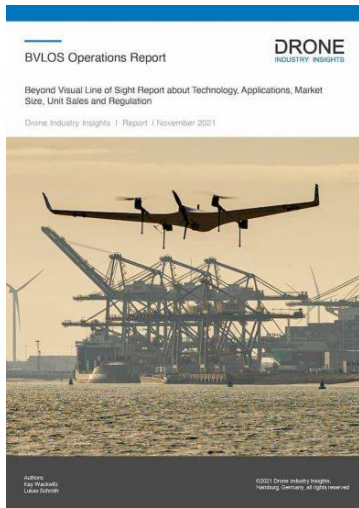


UAS and SmallSat Weekly News

DMAFB has an inexplicable magnetic pull for rogue drone pilots, or whoever was at the controls of the shadowy craft seemed to regard it as home. <https://dronedj.com/2021/11/22/tucson-police-chase-of-mystery-drone-in-feb-mirrored-2016-incident/#more-72039>

Latest Drone Industry Insights report projects 71.1% CAGR for BVLOS operations

November 16, 2021 Jenny Beechener UAS traffic management news,



The Drone Industry Insights BVLOS Operations Report 2021 predicts the beyond visual line of sight (BVLOS) market for drones will grow at a rate of 71.1% CAGR globally.

The report finds the market for rural BVLOS operations is and will remain larger than the urban market, though the urban market will grow faster. It identifies Asia as the largest market although South America will be the fastest-growing one. National regulation authorities will be led by the US Federal Aviation Administration (FAA) and European Aviation Safety Agency (EASA) as they continue to work on international standards for BVLOS operation. For more information visit: www.droneii.com

23Nov21

Dubai launches new program to boost drone transportation 20 November 2021

TradeArabia



The primary objective of the Dubai Program to Enable Drone Transportation is exploring the use of drones in health, security, shipping and food.

It seeks to improve people’s lives by reducing carbon emissions generated by traditional shipping and transportation methods and facilitating the movement of goods and materials.

The program also aims to attract talent as well as local and foreign investments to the drone applications sector in addition to creating new jobs and stimulating economic activity in relevant fields. It will create an advanced infrastructure that enables innovators to test prototypes of unmanned aerial vehicles in designated areas and develop legislation that optimizes their implementation, said Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum,



UAS and SmallSat Weekly News

Crown Prince of Dubai. Several government agencies such as DFF, Dubai Civil Aviation Authority and Dubai Silicon Oasis Authority have signed MoUs with private sector players including Majid Al Futtaim, Emirates SkyCargo and Fakeeh University Hospital.

https://www.zawya.com/mena/en/business/story/Dubai_launches_new_programme_to_boost_drone_transportation-SNG_262765109/

Jetex, Eve Partnering on eVTOL Ecosystem Charles Alcock November 22, 2021



Eve-Senna eVTOL

Business aviation support group Jetex is joining a growing list of prospective partners working with Embraer Eve to prepare the ecosystem for eVTOL operations. Last week at the Dubai Airshow the companies signed a memorandum of

understanding under which the companies would evaluate locations for developing the infrastructure needed for urban air mobility services.

However, Jetex and Eve provided no details as to where they might join forces when the eVTOL—branded as the Eve-Senna last week—starts commercial operations in 2026. Jetex, which started its business in the United Arab Emirates, did indicate that it could get involved in lobbying regulators and stakeholders in some parts of the world. Embraer subsidiary Eve has already announced ecosystem development partnerships in Europe, Asia, South America, and Australasia.

Jetex operates FBOs providing ground-handling services to business aircraft operators in 40 locations across 15 countries on five continents. It also offers trip planning and aircraft refueling services and has a newly established marketing alliance with Jet Club for fractional ownership sales covering the HondaJet. <https://www.ainonline.com/aviation-news/business-aviation/2021-11-22/jetex-eve-partnering-evtol-ecosystem>

23Nov21

WALMART DRONE DELIVERY PROJECT TAPS ZIPLINE AS ANOTHER PARTNER November 22, 2021 Sally French News

Rather than follow Amazon's lead with its own in-house drone delivery team, Walmart has partnered with arguably the largest drone delivery company out there to help test aerial package deliveries. While the retail giant has dabbled in drone delivery with other partnerships



UAS and SmallSat Weekly News

in the past (and still has other drone delivery projects ongoing, including one with **DroneUp**), the latest Walmart drone delivery partner is Zipline.



Zipline is largely considered the [largest drone delivery provider](#) out there, recently crossed the **200,000-delivery milestone**. That's double the amount of drone deliveries made by Google-sister company Wing, which this year crossed the significant [100,000-delivery milestone](#).

With the Walmart drone delivery partnership, Zipline marks its **first commercial deliveries in the U.S.** The deliveries will happen just down the road from Walmart's headquarters in **Bentonville, Arkansas**.

The tests will be contained to the city of Pea Ridge, which has a population of less than 7,000. But for those lucky few, most residents will be able to get on-demand deliveries of select health and wellness and consumable items from the city's Walmart Neighborhood Market.

The deliveries will fly from a 25-foot platform located directly behind Market. That platform serves as a take-off and landing pad for Zipline's drones, which are fixed-wing drones. They will be operated by Zipline — rather than Walmart — staff.

<https://www.thedronegirl.com/2021/11/23/walmart-drone-delivery/>

SVT Robotics Announces Completion of a \$25M Series A funding round Tim Ryan



This will likely be the biggest startup story in Hampton Roads in 2021. The round was led by Tiger Global Management, a venture firm with early-stage investments in companies such as Facebook, LinkedIn, Spotify, Coinbase, Stripe, Square, Instacart, and now SVT Robotics. Congratulations to A.K., Mike, and the entire

SVT Robotics team!!!

SVT Robotics received funding from global venture firms outside of the region. Hampton Roads is **now on the map** for other VC firms to explore for future funding opportunities. The lack of funding or follow-on funding is a common frustration from founders in the area, this is the first step to change the trajectory.



UAS and SmallSat Weekly News

This also means more jobs in the area. SVT Robotics has committed to hiring locally, first. If you or someone you know is looking for career opportunities, have them visit the SVT Robotics [career page](#). Even if SVT Robotics isn't able to hire locally, it will help our area better understand what areas need to be focused on when training our future workforce.

<https://www.startwheel.org/2021/11/22/svt-robotics-announces-completion-of-a-25m-series-a-funding-round/>

Stratospheric HAPS UAV Achieves Connectivity 19 Nov 2021 Phoebe Grinter

[Airbus](#) and [NTT DOCOMO, INC.](#) have successfully demonstrated the solar-powered Zephyr High Altitude Platform Station (HAPS) Unmanned Aerial Vehicle (UAV)'s ability to deliver future wireless broadband connectivity.



The trial took place in the United States in August when the Zephyr S UAV undertook **18-day stratospheric flights** to test various capabilities.

Test data was captured at different altitudes and at different times of day and night, focusing on assessing how connectivity is affected in the stratosphere by factors including weather conditions, different

elevation angles and aircraft flight patterns.

Tests included various bandwidths to simulate direct-to-device service from the HAPS to end users using low, nominal, and high throughput. The demonstration confirmed the viability and versatility of the 2GHz spectrum for HAPS-based services and the use of a narrow (450MHz) band to provide connectivity **in a range of up to 140km**.

Based on the results of this experiment, Airbus and NTT DOCOMO aim to provide communication services to mountainous areas, remote islands, and maritime areas where radio waves are difficult to reach. https://www.unmannedsystemstechnology.com/2021/11/stratospheric-haps-uav-achieves-connectivity/?utm_source=UST+eBrief&utm_campaign=6f39e94d36-ust-ebrief_2021-nov-23_engaged&utm_medium=email&utm_term=0_6fc3c01e8d-6f39e94d36-119747501&mc_cid=6f39e94d36&mc_eid=0d642a9d48



UAS and SmallSat Weekly News

24Nov21

Unmanned Helicopters: Alpha 900 Flying with Greek Navy Miriam McNabb November 23, 2021



The sale to the Greek Navy of 5 new Alpha 900 unmanned helicopters for use onboard ships launches Alpha Unmanned's new offering. The Greek Navy plans to use the Alpha 900s for maritime security and surveillance.

"The new Alpha 900 can take off vertically from a moving vessel and land autonomously on a navy vessel, requiring little space for those two essential operations," says a press release. "It can also fly relatively longer flight times compared to other similar-sized UAVS (up to 4hrs and carry payloads up to 4kgs) and it is built "Stanag Compliant" so that all critical systems are redundant. This makes it a very good technology for many navies, coast guards, and/or seaborne intelligence, surveillance, target acquisition, and/or reconnaissance operations."

With immigration issues a growing concern around the world, navies and coast guards have begun to adopt unmanned systems for maritime security and surveillance missions at an unprecedented pace.

The Alpha 900 will fill a gap for smaller military-grade UAVs to take off and land on naval vessels that is not currently filled, substituting larger and much more costly UAVs for ISTAR-related missions. <https://dronelife.com/2021/11/23/unmanned-helicopters-alpha-900-flying-with-greek-navy/>

Elroy Air, Ayr Logistics ink drone humanitarian aid delivery deal Bruce Crumley - Nov. 24th 2021



The pairing will combine the humanitarian-focused activities of both companies, involving – among other things – Ayr agreeing to purchase up to **100 Elroy Air** Chaparral cargo drones. Their mutual objective is to operate end-to-end, autonomous UAV logistics and delivery networks of humanitarian aid with **Ayr** filling the role of vehicle owner and operator.

Central to their cooperation is the vertical takeoff and landing Chaparral, a hybrid drone capable of carrying **300 lbs. to 500 lbs. of freight for up to 300 miles**. The craft is part of **Elroy**



UAS and SmallSat Weekly News

[Air](#)'s integrated, high-throughput **autonomous** aerial logistics system, and can takeoff, land, off-load, and take on payloads quickly with no operator interaction.

The UAV is designed to transport its cargo in lightweight, aerodynamic modular cargo pods that are prepared by ground personnel and picked up by the aircraft itself before takeoff. Delivery is also autonomous, with the pods being lowered to the ground after the drone's landing. That self-operating system makes the Chaparral what Elroy calls a "bidirectional conveyor belt through the sky." <https://dronedj.com/2021/11/24/elroy-air-ayr-logistics-ink-drone-humanitarian-aid-delivery-deal/>

25Nov21

CHECK OUT THIS MOBILE, ELECTRIC DRONE COMMAND CENTER November 23, 2021 Sally French News



If you're always flying drones at a different location, then you might want a mobile command center. Rather than setup and tear down your gear or find a place to charge in a different environment every time, a mobile

command center might ensure all your drone stuff is where you want it, your devices are charged (and you have a means for charging them), and you can manage your systems to your liking, rather than what's most convenient to every place you fly. And now, there's a fully electric mobile sUAS command center on the market.

Volta Power Systems has partnered with specialty vehicle manufacturer Draxxon to build what it claims is **the first mobile and fully electric drone command center**. It's towable, so you can put it on early any towing vehicle and bring it with you wherever you're flying. Here's what the new mobile command center can do:

- Integrate drones into other command and control systems for potential, additional surveillance.
- Run up to 24 hours on a single Volta system charge, without needing a separate generator or requiring your towing vehicle to idle.
- Provide both interior and exterior monitoring.
- Serve as a fold-down rooftop flight station for drone use on nearly any size trailer.



UAS and SmallSat Weekly News

And with gas prices at all-time highs, this isn't just a more sustainable option for the environment, but perhaps a more sustainable option for your wallet, too.

<https://www.thedronegirl.com/2021/11/25/mobile-electric-drone-command-center/>

Skyports to build Europe's first trial eVTOL vertiport near Paris Bruce Crumley - Nov. 25th 2021



Skyports, the London-based builder of infrastructure for electric vertical takeoff and landing (eVTOL) craft, has now been chosen to build **Europe's first test vertiport** outside Paris.

Skyports, which calls itself the world's leading designer, developer, and operator of eVTOL

vertiports, has been tapped to create and operate the trial facility at a small airfield in Cergy-Pontoise northwest of Paris. Backed by a host of major air and other transport actors, the test vertiport will be used to prepare advance air mobility (AAM) services like air taxis that officials have pledged will begin in time for the 2024 Paris Summer Olympics.

Project partners include the operator of Paris area airports, [Groupe ADP](#), the capital's mass transit system [RATP Group](#), and the [Choose Paris Region](#) agency promoting business implantation in the region. It falls under their mutual Re.Invent Air Mobility initiative seeking to plan, speed, and launch new AAM services in and around Paris. The venture is also being supported by France's civil aviation authority and the European Union Aviation Safety Agency.

Skyports has been tasked with building and managing the trial vertiport, whose functioning will initially allow participants to test and perfect technological and operational aspects of AAM. The Cergy-Pontoise location, meanwhile, allows the project to be run within the environment of a functioning Paris airport, albeit one with sufficiently limited traffic to ensure safety.

The world's top eVTOL aircraft manufacturers like Volocopter, Vertical Aerospace, Airbus, Pipistrel, eHang, and others will be invited to stage test and demonstration flights at the vertiport. Paris officials hope for be the launch of air taxi services ahead of the 2024 Games.

The vertiport will be equipped with a range of up-to-date tech applications, including biometric identity management, eVTOL re-charging equipment, situational awareness capabilities, and weather stations. Data collected during trial operation of the facility will be used to shape



UAS and SmallSat Weekly News

developing AAM regulatory frameworks. <https://dronedj.com/2021/11/25/skyports-to-build-europes-first-trial-evtol-vertiport-near-paris/>

26Nov21

WHATEVER HAPPENED TO THE WALMART DRONEUP INVESTMENT? November 23, 2021 Sally French News



Walmart announced in June 2021 that it was making a major investment in the drone industry, putting an undisclosed sum of money into drone service provider **DroneUp**. It's been nearly six months since then, and it turns out, the drone delivery partnership has delivered. The **latest updates** in the Walmart DroneUp investment news are **pretty darn good**.

The first operation occurred at a Walmart Neighborhood Market in **Farmington, Arkansas**. Walmart announced in November that DroneUp would launch **three** full-time "hubs" for on-demand delivery operations. They will bring items to eligible customers by air in as little as 30 minutes.



For now, the deliveries are available to eligible customers in Farmington, Arkansas. But DroneUp said additional locations at a Walmart Neighborhood Market in Rogers, Arkansas and a Walmart Supercenter in Bentonville will open in the coming months.

DroneUp isn't the only external drone delivery partner that Walmart is turning to. **Separately**, [Walmart is partnering with California-based Zipline](#) to test drone deliveries with a select group of customers in **Pea Ridge, Arkansas**. For that test, residents of the small town will be able to receive primarily medically oriented products via drone within 15-30 minutes.

Zipline says that the Pea Ridge product demonstrates its power in delivering necessary goods to hard-to-reach, rural communities and to at-risk populations like elderly customers.

<https://www.thedronegirl.com/2021/11/26/walmart-droneup-investment/>