



UAS and SmallSat Weekly News

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Stellantis to Manufacture Archer eVTOL, Provide Strategic Funding Miriam

McNabb January 05, 2023 by DRONELIFE Staff Writer Ian M. Crosby



[Stellantis N.V.](#) and [Archer Aviation Inc.](#) announced that they are expanding their partnership in order to manufacture Archer's Midnight electric vertical take-off and landing (eVTOL) aircraft.

The partners will collaborate to establish Archer's new Covington, Georgia-based manufacturing facility where they intend to start manufacturing the Midnight aircraft in 2024. Made to be safe, sustainable, and quiet, Midnight has an expected payload of **over 1,000 pounds**, and can carry four passengers in addition to a pilot. With a **range of 100 miles**, the aircraft is ideally suited to recurrent short distance trips of around 20 miles, with a charging time of about 10 minutes in-between.

This partnership will make use of the strengths of both companies to bring the Midnight aircraft to market, relying on Archer's world-class team of eVTOL, electric powertrain and certification experts and Stellantis' advanced manufacturing technology and expertise, experienced personnel, and capital. Stellantis is intended to mass produce Archer's eVTOL aircraft as an exclusive contract manufacturer.

Stellantis will additionally provide up to **\$150 million in equity capital** for potential draw by Archer at its discretion in 2023 and 2024. The company also aims to expand its strategic shareholding via the purchase of further Archer stock. This will allow Stellantis to become a longstanding, foundational investor in Archer. <https://dronelife.com/2023/01/05/stellantis-to-manufacture-archer-evtol-aircraft/>

Hoverfly Technologies Awarded Patent for Tethered Drone Landing Technology

January 5, 2023 News



Hoverfly Technologies Inc. has received a patent from the US Patent Office for its "Landing Structure for an Unmanned Aerial Vehicle." This patent covers the technology to land its tethered drones which are equipped with a tether that allows them to receive power and data as they fly. These drones, known as



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Variable Height Antennas, have a range of uses including defense, security, and public safety, and can be integrated onto both manned and unmanned vehicles and vessels. The patent will protect Hoverfly's landing technology for its tethered drones, allowing for precise take-off and landing. This makes them particularly useful for tasks that require continuous or long-duration surveillance or monitoring.

Hoverfly Technologies Inc. has been issued U.S. Patent No. 11,518,542 for the "Landing Structure for an Unmanned Aerial Vehicle." https://uasweekly.com/2023/01/05/hoverfly-technologies-awarded-patent-for-tethered-drone-landing-technology/?utm_source=rss&utm_medium=rss&utm_campaign=hoverfly-technologies-awarded-patent-for-tethered-drone-landing-technology&utm_term=2023-01-06

GAO: Lack of clarity over electric aircraft risks tax confusion for advanced air mobility

PAUL BRINKMANN | JANUARY 4, 2023



Joby Aviation's S4, a remotely piloted pre-production prototype, was photographed during a test flight in October 2022. Credit: Joby Aviation

If the U.S. Congress wants to avoid confusion over whether or when electric aircraft operators must collect taxes from passengers and cargo customers, lawmakers should update the terminology in the tax code, according to a [report](#) from the Government Accountability Office that was released Tuesday.

Right now, tax liabilities are described in terms of helicopters and fixed-wing aircraft, but the emerging advanced air mobility industry designs have attributes of both. This situation "requires some clarification" related to exemptions from certain taxes, said the GAO's Heather Krause, the report's lead author.

This lack of clarity could lead to litigation if an AAM operator is unable to receive a tax exemption because its aircraft don't neatly fit in either of the two historic aircraft types, the report warns. https://aerospaceamerica.aiaa.org/gao-lack-of-clarity-over-electric-aircraft-type-definitions-risks-tax-confusion-for-advanced-air-mobility-industry/?utm_campaign=AerospaceAmericaAMB&utm_medium=email&_hsmt=240675254&_hsenc=p2ANqtz-tB58McHmldOnl1uNv0J0S-8lvuTOKHOtAYK3Y1_VcTCRZHsheSVpK2JK80nf_id8DoRi9ko6qjS0NcgPCMeHmh9_2mg&utm_content=240676058&utm_source=hs_email



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FCC Proposes Radio Licenses for UAS Operators Mark Huber January 5, 2023



On Wednesday the Federal Communications Commission (FCC) proposed rules to enable wireless communications for unmanned aircraft system (UAS) use in the 5030- to 5091-MHz band. They include **mandatory** radio licenses for UAS operators.

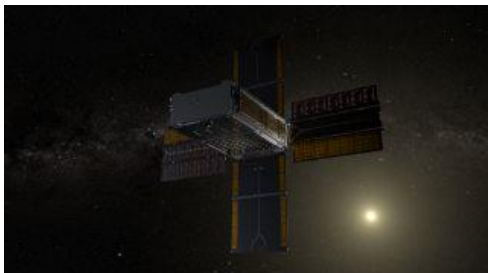
A [Notice of Proposed Rulemaking](#) (NPRM) was developed by the FCC in collaboration with the FAA and the National Telecommunications and Information Administration—the same three agencies with ongoing responsibility for resolving issues related to 5G C-band cellular implementation and potential radar altimeter interference. The agencies developed this NPRM as part of the Inter-department Radio Advisory Committee process.

This NPRM **seeks comment** on rules for 5030 to 5091 MHz that would provide UAS operators with access to the licensed spectrum with the reliability necessary to support safety-critical communications links. Specifically, the FCC is seeking comment about the sufficiency of FCC rules regarding potential interference or performance degradation between terrestrial mobile operations and UAS on flexible-spectrum bands.

The NPRM also proposes to **require UAS operators to obtain an FCC license** to communicate with ATC and other aircraft on the aeronautical VHF band “to further promote the safe integration of unmanned aircraft operations in controlled airspace and facilitate flight coordination.” <https://www.ainonline.com/aviation-news/general-aviation/2023-01-05/fcc-proposes-radio-licenses-uas-operators>

Track NASA's space radiation experiment BioSentinel as it flies around the sun

sun [Doris Elin Urrutia](#) published 1 day ago



An illustration of NASA's BioSentinel cubesat as it flies around the sun. (Image credit: NASA/Daniel Rutter)

You can follow NASA's [BioSentinel](#) satellite as it flies around the sun with a microorganism-radiation experiment onboard.



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The shoebox-sized cubesat flew past the [moon](#) after hitching a ride on [Artemis 1](#), which launched Nov. 16, 2021, to kick off the space agency's [newest push toward crewed exploration of space](#). Both missions share a common goal: to learn about the space environment so that astronauts can fly as safely as possible on [Artemis 2](#) and beyond. Artemis 1 lasted 26 days and ended with an [epic splashdown](#) on Dec. 11 in the Pacific Ocean. But BioSentinel's mission is still happening. Now, [the public can follow the small satellite](#) as it flies brewer's yeast through space.

Through its "[Eyes on the Solar System](#)" visualization tool, NASA invites the public "to virtually ride along with BioSentinel's deep space journey." The space agency [announced](#) BioSentinel's inclusion in the feature, which also shows the positions of the planets relative to other NASA spacecraft. <https://www.space.com/nasa-biosentinel-cubesat-track-in-deep-space>

GA-ASI Flies First Production MQ-9A Reaper with Enhanced Strategic

Reconnaissance January 6, 2023 Military | News



General Atomics Aeronautical Systems (GA-ASI) has flown the first production MQ-9A Multi-Domain Operations (M2DO)-ready variant of the US Air Force's MQ-9A Reaper drone. The upgraded MQ-9A Block 5 drone, also known as the "-25", includes a number of new features that will enable the integration and fielding of Open Mission Systems as well as new sensors that will expand the drone's strategic reconnaissance capabilities. Some of these features include improved power distribution and redundancy, GPS improvements, radar altimeters, nose wheel steering and angle of attack sensor system improvements.

The US Air Force and US Marine Corps will both receive these improved aircraft under current contracts, although the total number of aircraft receiving these improvements has not been disclosed. GA-ASI Vice President of USAF Programs, Claudia Mowery, said: "We're excited to position the MQ-9A enterprise for new missions through these capabilities. Future funding could potentially expand these capabilities to the entire MQ-9A fleet."

https://uasweekly.com/2023/01/06/ga-asi-flies-first-production-mq-9a-reaper-with-enhanced-strategic-reconnaissance-capabilities/?utm_source=rss&utm_medium=rss&utm_campaign=ga-asi-flies-first-production-mq-9a-reaper-with-enhanced-strategic-reconnaissance-capabilities&utm_term=2023-01-06



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Percepto drones earn ‘unprecedented’ FAA high altitude BVLOS approval

Bruce Crumley - Jan. 6th 2023



Ground-breaking autonomous drone systems developer [Percepto](#) says it has attained another unprecedented [Federal Aviation Agency](#) (FAA) beyond visual line of sight (BVLOS) authorization, this time for its nested UAVs to be used at a solar power plant in Texas to perform highly automated inspections at high altitudes.

Israel-based Percepto [says](#) the [FAA approval](#) of its drone-in-a-box platform to carry out highly automated [BVLOS](#) inspections at the Texas solar plant is [unprecedented](#) due to the altitudes at which those missions may now be carried out. The company says the authorization permits those flights of up to **200 feet** above ground level – double the maximum all similar operations that previously received clearance.

[Percepto](#) says the ability to perform highly automated [BVLOS drone flights](#) at such heights is essential to permitting increased operational flexibility, and enabling the monitoring of broader areas and taller structures than previously possible – including for mapping and modeling objectives.

Percepto [BVLOS-operated drones](#) function using the nested system’s automated detect and avoidance capabilities. Those render visual observation and remote piloting obsolete in the event of other aircraft entering the same airspace, thanks to the platform’s **automatic airspace deconfliction tech**.

The FAA authorization of Percepto drones to fly highly automated [BVLOS missions](#) at increased altitudes creates the possibility of reducing the number UAVs needed to inspect modest-sized [infrastructure installations](#), and to monitor vast expanses of assets with centrally controlled drone-in-a-box fleets. <https://dronedj.com/2023/01/06/percepto-drones-earn-unprecedented-faa-high-altitude-bvlos-approval/>



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AUTEL EVO MAX 4T DRONE LAUNCHES AT CES 2023 January 5, 2023 Sally French



This powerhouse, commercial drone is set to be a worthy competitor to the DJI M30T drone — and it could continue to eat into [DJI's shrinking market share](#) on the enterprise side of things.

Though Autel also says the EVO Max 4T is good for “prosumer” applications, this is really more of an enterprise drone given the depth of the technology powering it. Among its key features are omnidirectional obstacle avoidance and tri-anti interference capability, accurate navigation without GPS and three cameras. It can fly for 42 minutes, at altitudes as high as **23,000 feet**. Alas, that’s not quite enough to [fly over the top of Everest](#), which is 29,000 feet, but it could at least fly over Everest Base Camp.

Pricing varies based on a few factors including configuration and dealer, but will run somewhere in the \$7,000 to \$9,000 range.

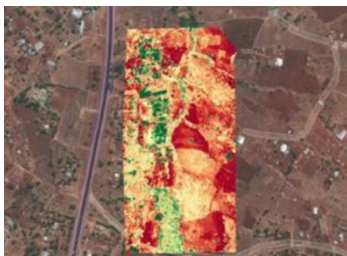


This drone comes with an incredible three cameras. They are:

- A telephoto camera
- A 50MP wide-angle camera
- A thermal camera

<https://www.thedronegirl.com/2023/01/09/autel-evo-max-4t-drone-launches-at-ces-2023/>

GLOBHE: The Impact Tech Company Capturing Drone Data in Every Corner of the World Miriam McNabb January 06, 2023 Napoleon Bergstrom, GLOBHE Deputy CEO and COO



Measuring plant health

Stockholm-based startup [GLOBHE](#) was started only 7 years ago – but they have already achieved a place in the Guinness Book of World Records ([largest album of drone-collected images](#)) and on the global stage of impact tech companies, those companies



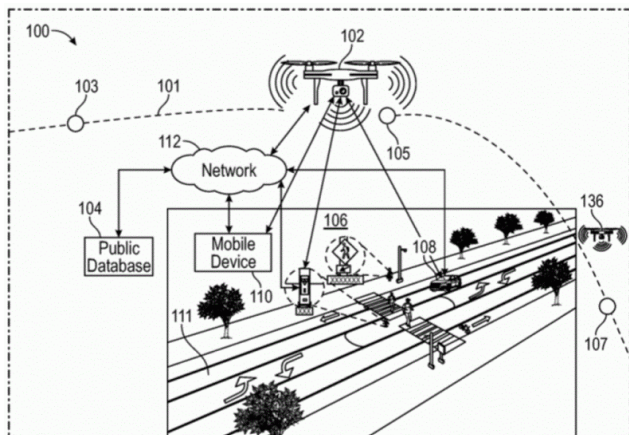
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addressing major environmental or social issues through the intentional and responsible use of technology.

“GLOBHE is short for Global Health: that’s what we want to achieve, and that’s what we stand for,” says GLOBHE COO and Deputy CEO, Napoleon Bergstrom. “We are helping companies by providing something critically important – that’s data.”

Founded in 2015 by industry visionary Helena Samsioe, in 2019 the company made a major move towards scaling access to drone data that can be used for environmental protection, disaster relief and prevention, and community planning. GLOBHE’s marketplace platform connects customers to local drone operators in over **129 Countries**: the marketplace boasts 6,600 drone operators currently and is growing daily. That means that customers can get data products which enable them to understand a location without going there, through orthomosaic data, 3D models, and terrain models. <https://dronelife.com/2023/01/06/globhe-the-impact-tech-company-capturing-drone-data-in-every-corner-of-the-world/>

Ford files patents to integrate drones with automobiles January 3, 2023 Philip Butterworth-Hayes UAS traffic management news



the patent was filed on 9 June 2021 and published on 15 December 2022 and assigned serial number 0398932.

“In recent months, Ford has filed a host of patents related to drones, including one for a [vehicular drone storage compartment system](#), a collaborative system [between an unmanned aerial vehicle \(UAV\) and an automobile](#), an [unmanned aerial vehicle sanitation system](#), a [jump start system that would use drones](#), an [unmanned aerial vehicle integration system](#), and a [vehicle-mounted aerial drone container](#),” said the report. “Now, that trend continues with this recent filing for drone flights over public roadways.

“It’s worth noting that the Federal Aviation Administration does not permit drone use over public roadways. This is because the devices employ batteries that only enable them to fly for a short period of time, leaving open the possibility that they could run out of power and fall to the ground, potentially striking people or vehicles in the process. That’s precisely where this



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patent comes in to play – it presents a way to ensure that drones can safely fly over public roadways and other restricted locations by alerting those nearby to its presence. Additionally, the drone would be able to alter its flight path to avoid a crash as well. This is made possible via a variety of methods – vehicle-to-everything (V2X) technology, Bluetooth, Wi-Fi, cameras, and radio-based signals as well.” <https://www.unmannedairspace.info/latest-news-and-information/ford-files-patents-to-integrate-drones-with-automobiles-reports-ford-authority/>

Startup FlyBIS Looks Brazilian to Launch eVTOL Airline With Eve Ben

Goldstein January 06, 2023



Based in Brazil’s mountainous southern region, startup FlyBIS is looking to launch its urban air mobility (UAM)-focused airline service in 2026 using electric vertical takeoff and landing (eVTOL) vehicles sourced from Eve Air Mobility.

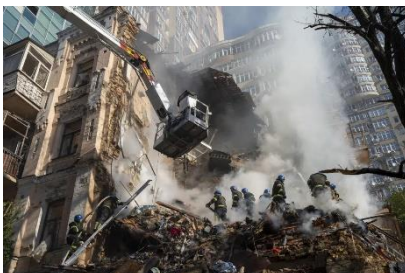
The Caxias do Sul-based company gained attention after announcing a letter of intent in December **to purchase 40 aircraft** from Eve Air Mobility. In addition to the order, the two companies announced a partnership aimed at collaborating to build out advanced air mobility (AAM) services in the South of Brazil.

FlyBIS is also backed by Brave Aviation, the Brazilian aircraft management company with a fleet of Embraer Phenom 100s, Piper Meridians and Cirrus SR22s.

Speaking to the AAM Report, FlyBIS co-founder and CEO Gustavo Zanettini said that Southern Brazil has many congested cities such as Porto Alegre and Florianópolis which despite their relatively modest sizes compared to Sao Paulo or Rio de Janeiro, “have huge problems with traffic that can be a real nightmare for tourists and for businesses.”

<https://aviationweek.com/aerospace/advanced-air-mobility/brazilian-startup-flybis-looks-launch-evtol-airline-eve>

Iranian drone maker sanctioned for supplying Moscow FATIMA HUSSEIN January 6, 2023



FILE - Firefighters work after a drone attack on buildings in Kyiv, Ukraine

WASHINGTON (AP) — The U.S. on Friday hit six executives and board members of an Iranian drone manufacturer with



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sanctions after the firm allegedly supplied Moscow with drones that Russian forces have been using to attack Ukraine.

Qods Aviation Industries, a previously sanctioned Iranian defense manufacturer, is alleged to be responsible for the design and production of unmanned aerial vehicles used to conduct strikes on civilians during Russia's invasion of Ukraine. The financial penalties imposed by Treasury's Office of Foreign Assets Control highlight the growing tension between the U.S. and Iran over reviving the 2015 nuclear deal as well as U.S. allegations of Russia and Iran deepening cooperation through shared military assistance as the war rages on.

The latest sanctions follow a round imposed on Iranian-based [Shahed Aviation Industries Research Center](https://apnews.com/article/russia-ukraine-iran-politics-us-department-of-the-treasury-military-technology-44d79e61be9ae00e52fb14dfc8cbf21c), which the U.S. says designs and produces drones used by Russian forces in Ukraine, and several firms that are said to facilitate the transfer of Iranian drones to Russia. <https://apnews.com/article/russia-ukraine-iran-politics-us-department-of-the-treasury-military-technology-44d79e61be9ae00e52fb14dfc8cbf21c>

DroneShield's Advanced Drone Detection Technology Earns \$11 Million Order

January 9, 2023 Counter UAS



DroneShield has received a new purchase order worth approximately AUD 11 million from a government agency customer. The order includes various types of DroneShield counterdrone equipment and is expected to be delivered by mid-2023. The proceeds will be received in the March and June quarters of 2023, subject to obtaining necessary export approvals.

This follows another AUD 11 million purchase order from a different government in December 2022. DroneShield CEO Oleg Vornik commented that the company has reached an inflection point and is ready to handle the increase in supply chain, production, and deployment that this order will require. The purchase includes an annual subscription component, contributing to the company's goal of generating annual recurring revenues.

DroneShield has also recently secured several other wins, including a recommendation by the Joint Counter-small Unmanned Aircraft Systems Office, a Small Business Innovation Research project award, and deployment at the first US airport, among others. In November 2022, the company received an AUD 3.7 million investment from Epirus, a US defense technology company. <https://uasweekly.com/2023/01/09/droneshields-advanced-drone-detection-technology->



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[earns-11-million-order/?utm_source=rss&utm_medium=rss&utm_campaign=droneshields-advanced-drone-detection-technology-earns-11-million-order&utm_term=2023-01-09](#)

Percepto Approved for Record-Breaking BVLOS Drone Deployments for Remote Operations January 9, 2023 News



Percepto, a leading provider of highly automated drone solutions, has been approved for record-breaking altitude beyond visual line of sight (BVLOS) drone deployments for remote operations.

Percepto's drones are designed for remote inspections, monitoring, and data collection in a variety of industries, including oil and gas, utilities, and telecommunications. The company's innovative approach to drone automation allows for seamless integration with existing systems and processes, enabling organizations to increase efficiency, reduce costs, and improve safety.

According to a recent study, the global market for BVLOS drone operations is expected to grow significantly in the coming years, driven by the increasing adoption of drones in various sectors and the relaxation of regulatory restrictions. Percepto is well-positioned to capitalize on this growth and lead the way in the industry with its advanced technology and regulatory compliance. https://uasweekly.com/2023/01/09/percepto-approved-for-record-breaking-altitude-bvlos-drone-deployments-for-remote-operations/?utm_source=rss&utm_medium=rss&utm_campaign=percepto-approved-for-record-breaking-altitude-bvlos-drone-deployments-for-remote-operations&utm_term=2023-01-09

US EPA Approves the SnifferDRONE™ for Monitoring Landfill Methane Emissions

January 9, 2023 News



[Sniffer Robotics](#), a leading environmental technology enabled services company, announced the US EPA has broadly approved its SnifferDRONE method to monitor landfill methane emissions as an alternative to existing federal regulations. The EPA regulatory approval with complete details can be [read here](#).

New aerial technologies are entering the market to better account for landfill emissions. These technologies include satellites, manned aircraft, and other drone-based technologies. The



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SnifferDRONE's "hyper-local" solution is unique in collecting air samples directly at the ground surface, measuring methane concentrations within collected air samples in parts per million (ppm) and correlating measurements to discrete latitude/longitude coordinates during flight.

This data is then transformed into specific leak locations consistent with US EPA regulations as actionable information. The data can also be transformed to estimate fugitive gas emissions and analyzed to understand site gas migration in conjunction with operational changes.

https://uasweekly.com/2023/01/09/us-epa-approves-the-snifferdrone-for-monitoring-landfill-methane-emissions/?utm_source=rss&utm_medium=rss&utm_campaign=us-epa-approves-the-snifferdrone-for-monitoring-landfill-methane-emissions&utm_term=2023-01-09

Police team in UK reports 'record year' for crime-fighting drones Ishveena Singh - Jan. 9th 2023



Nottinghamshire Police in the UK say 2022 was the busiest year to date for its drone operators, with more deployments, arrests, and interventions than ever before.

Founded in January 2020, this drone team has used crime-fighting aircraft more than **1,100 times** to support police operations and has clocked some **550 hours** of flight time in the process. Drone operators have been able to track down criminal suspects on 43 occasions with the help of [high-resolution cameras](#) and thermal imaging sensors.

Some notable arrests include two suspected vandals hiding in a back garden, a wanted man hiding in a caravan, a trio of suspected thieves hiding in the woods, and a suspected drunk driver hiding in a bush in the dead of night.

Finding missing people is also a vital part of the team's work, as a single drone operator is able to effectively search large areas in a matter of minutes. **Twelve missing people** were found using drones in 2022. Multiple eyes in the sky also helped Nottinghamshire Police **to recover 10 stolen vehicles** last year. <https://dronedj.com/2023/01/09/uk-police-drone-crime-fighting/#more-90057>



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Percepto Wins FAA Approval for Automated BVLOS Ops in TX Miriam

McNabb January 09, 2023 by DRONELIFE Staff Writer Ian M. Crosby



Today, leading autonomous inspection and monitoring solution provider [Percepto](#) announced that its drone-in-a-box solution has been authorized by the Federal Aviation Administration to conduct highly automated Beyond Visual Line of Sight inspection and monitoring operations at a **solar power plant in Texas**.

The approval extends to up to 200 feet above ground level, twice the altitude of any previously approved HA BVLOS drone operation in the U.S. and allowing for more operational flexibility to monitor larger areas and structures, such as mapping and modeling applications.

Percepto's advanced technology enables an automated detect and avoid cycle **without the need for a pilot or visual observer on site**, removing the requirement for remote pilot in command intervention upon detection of other aircraft within the airspace. This functionality will enable the future deployment of centrally controlled drone-in-a-box fleets of multiple sites. <https://dronelife.com/2023/01/09/percepto-wins-faa-approval-for-automated-bvlos-ops-in-tx/>

uAvionix wins FAA Approval for BVLOS Flights in North Dakota Network: A First for Vantis Miriam McNabb January 09, 2023



In a **first** for [North Dakota's Vantis](#) network, the FAA has granted uAvionix approval to operate drone flights beyond visual line of sight (BVLOS) in North Dakota. The approval leads the way for commercial drone companies to utilize the Vantis network to test and execute advanced drone operations. It's a validation of North Dakota's investment in the drone

industry and could lead the way for other states. From the press release:

Leveraging Vantis, the state's first-of-its-kind UAS network, uAvionix, a drone company, received approval by the Federal Aviation Administration to conduct beyond visual line-of-sight drone flights in North Dakota. uAvionix demonstrated to the FAA that it established adequate risk



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mitigations to satisfy required safety standards for the specified BVLOS operation within the national airspace system.

North Dakota has invested in the drone industry for almost a decade, funding the Northern Plains UAS Test Site in 2013. Since then, they've expanded support for the drone industry culminating in Vantis, a drone operating framework that puts the infrastructure and ecosystem, including ground-based infrastructure, in place to allow safe advanced operations – dramatically cutting the time and investment that any individual company would require to establish a similar testing ground. <https://dronelife.com/2023/01/09/uavionix-wins-faa-approval-for-bvlos-flights-in-north-dakota-drone-network-a-first-for-vantis/>

Johns Hopkins APL Develops Collision Avoidance & New Takeoff Capabilities for UAVs Jamie Bennet January 9, 2023



Johns Hopkins Applied Physics Laboratory researchers developed an algorithm that enabled [fixed-wing unmanned aerial vehicles](#) to avoid potential collisions in complex environments.

The study also resulted in a new maneuvering capability that allowed the UAVs to launch in near-vertical takeoffs, eliminating the need for long runways or manual lift-off, the laboratory said Thursday.

To achieve the predictive control algorithm, researchers equipped the fixed-wing vehicles with an onboard depth camera and NanoMap, a mapping system developed by the Massachusetts Institute of Technology. The camera's stereo feature gave the UAV depth of perception and enabled triangulated collection of data, even in extremely constrained spaces and at a speed of 20 miles per hour.

Aside from evading threats and other objects of interest, the technology also shows promise for intelligence gathering, the scientists said. <https://executivegov.com/2023/01/johns-hopkins-apl-develops-collision-avoidance-new-takeoff-capabilities-for-uavs/>

7 Hour Endurance Hybrid VTOL UAV Released Sarah Simpson / 05 Jan 2023

The newly released [FDG50F](#), by FlyDragon Drone Tech, is a high-performance vertical take-off and landing (VTOL) fixed-wing unmanned aircraft system (UAS), with a payload capacity of 10kgs and a flight endurance of up to 7 hours.



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Designed specifically for aerial surveying and surveillance applications, the waterproof platform is designed to meet complex weather and flight conditions, and for unobstructed aerodynamic flight, the main antenna is integrated with the landing gear to reduce drag.

Combining the VTOL advantages of a multirotor, with the extended range of fixed-wing UAV, the [FDG50F](#) is a flexible solution to endurance unmanned flight, capable of adapting to various complex take-off and landing conditions. The aerodynamic modular design can be disassembled without tools and reassembled in just 3 minutes.

FlyDragon Drone Tech is looking for global distributor, [contact for further details >>](#)
https://www.unmannedsystemstechnology.com/2023/01/7-hour-endurance-hybrid-vtol-uav-released/?utm_source=UST+eBrief&utm_campaign=88c360c5fa-ust-ebrief_2023-jan10&utm_medium=email&utm_term=0_6fc3c01e8d-88c360c5fa-119747501&mc_cid=88c360c5fa&mc_eid=0d642a9d48

US EPA Approves SnifferDRONE 9 January 2023 Press



[Sniffer Robotics](#), a leading environmental technology-enabled services company, announced the US EPA has broadly approved its SnifferDRONE method to **monitor landfill methane emissions** as an alternative to existing federal regulations. The EPA regulatory approval with complete details can be [read here](#).

The SnifferDRONE's "hyper-local" solution is unique in collecting air samples directly at the ground surface, measuring methane concentrations within collected air samples in parts per million and correlating measurements to discrete latitude/longitude coordinates during flight. This data is then transformed into specific leak locations consistent with US EPA regulations as actionable information. The data can also be transformed to estimate fugitive gas emissions and analyzed to understand site gas migration in conjunction with operational changes.

In November 2022, the US EPA presented a Draft Report on the Social Cost of Greenhouse Gases estimating methane's social cost due to the future impacts of climate change at \$1,600/metric ton. This cost translates to landfill methane emissions' overall societal cost of \$136+ billion annually. Further, methane emissions that could be collected and converted to energy is lost revenue to the industry – estimated at \$6 Billion annually based on a Renewable



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Natural Gas valuation. The opportunity to reduce landfill emissions directly benefits firms' operations and society's quality of life. <https://www.suasnews.com/2023/01/us-epa-approves-snifferdrone/>

Aska Unveils Fully Functional Prototype of its A5 Drive-and-Fly Electric VTOL Vehicle at CES January 10, 2023 News



US-based startup Aska has revealed a full-scale prototype of its A5 drive-and-fly electric vertical takeoff and landing (eVTOL) vehicle at the CES 2023 consumer electronics show in Las Vegas. The four-seat A5 has tandem wings that can be stowed on top of the SUV-sized vehicle for drive mode and unfold for flight. It is powered by a hybrid-electric propulsion

system made up of lithium-ion batteries and a gasoline engine as a range extender, which allows for a flight range of 250 miles and a minimum of 30 minutes of reserve flight time. The vehicle also has four in-wheel motors for all-wheel drive for road use and six propellers mounted on the wings for vertical lift and thrust during forward flight. Testing of the uncrewed prototype is planned to begin in the first quarter of the year. Aska is targeting certification of the A5 for 2026 and has already **received pre-orders from individual buyers for nearly 100 vehicles.**

The A5 is designed to be able to take off and land in a variety of ways. It can take off and land vertically using its six propellers, but it can also take off and land conventionally on its wings to reduce energy consumption. Additionally, it can perform a short takeoff by accelerating to liftoff speed using its in-wheel motors. This allows the A5 to take off in less than five seconds with a 250-foot ground roll, according to Aska Co-Founder and CEO Guy Kaplinsky.

The hybrid-electric propulsion system provides a flight range of 250 miles and a minimum of 30 minutes of reserve flight time. The use of a gasoline engine as a range extender also provides redundant energy sources and independence from ground charging infrastructure, said Kaplinsky. In case of emergency, the aircraft can glide to a safe landing, and a whole aircraft **ballistic recovery parachute** is included in the design as an added safety measure.

https://uasweekly.com/2023/01/10/aska-unveils-fully-functional-prototype-of-its-a5-drive-and-fly-electric-vtol-vehicle-at-ces-2023/?utm_source=rss&utm_medium=rss&utm_campaign=aska-unveils-fully-functional-prototype-of-its-a5-drive-and-fly-electric-vtol-vehicle-at-ces-2023&utm_term=2023-01-10



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FCC moves to unleash more spectrum for drone communications Ishveena Singh - Jan. 10th 2023



The US Federal Communications Commission (FCC) has proposed new rules to promote access to licensed radio spectrum by drone operators. In the absence of licensed spectrum, drones are being operated primarily under unlicensed and low-power wireless communications rules or experimental licenses. Neither of these spectrum resources provides drone users with any right to protection from harmful interference.

With drone use evolving to include the transport of heavy cargo and even human passengers, there has never been a greater need for reliable control- and safety-related communications with drones. This can be promised only with an interference-protected licensed spectrum.

The FCC has issued a Notice of Proposed Rulemaking ([NPRM](#)), explaining that it wants to open up the 5 GHz band to drones. Other proposals include exploring 5G as a drone platform and the broader use of cellular bands for drone applications. The FCC is also proposing a way to license drone communications with air traffic control. <https://dronedj.com/2023/01/10/fcc-drone-spectrum>

11Jan23

The Top 5 Items Ordered for Drone Delivery: Walmart Publishes the Numbers Miriam McNabb January 10, 2023



Walmart was the first of the big retailers in the US to implement drone delivery. Operated by drone services providers including [DroneUp](#), [Flytrex](#), and [Zipline](#), Walmart currently has drone delivery “hubs” in **36 stores located across 7 states**. In 2022, the company executed more than 6,000 drone deliveries, which are executed in 30 minutes or less. While more than 20,000 items are offered for drone delivery service – and Walmart says that 85% of the products found at a Neighborhood Market meet the weight (10 pounds) and volume requirements to qualify.

Walmart says 5 customer favorites are:

- Great Value Cookies and Cream ice cream
- 2-lb bags of lemons



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- Rotisserie Chicken
- Red Bull
- Bounty Paper Towels

The complex framework of regulations, hardware, software, pilot networks and licensing, ground and packaging infrastructure, communications technology, and inventory has reached a level of maturity that allowed wider implementations for Walmart in 2022 and put Amazon's drones in the air in two test communities. <https://dronelife.com/2023/01/10/the-top-5-items-ordered-for-drone-delivery-walmart-publishes-the-numbers/>

12Jan21

ALPHABET PULLS BACK CURTAIN ON ITS WING REMOTE OPERATIONS

CENTER January 11, 2023 Sally French



Wing, which is a subsidiary of Alphabet and a sister company to Google, recently shared a video that pulls back the curtain on how it's operating. While there is no clear system of air traffic control for drones in the U.S. (at

least not yet), Wing — which has one of the largest drone fleets in the U.S. given its delivery operations — has its own series of Remote Operations Centers.

The first Wing Remote Operations Center operated at Wing's headquarters in Palo Alto, California. Wing has since added a second Remote Operations Center located in the Dallas-Fort Worth Metroplex. [Wing expanded to the Dallas suburb of Frisco](#) at the end of 2021 where it delivers items to real peoples' homes from Walgreens.

Wing's drones are **fully autonomous**, meaning there is no pilot in a room maneuvering a joystick through FPV goggles. Its delivery drones fly autonomous routes, and human staff at operations centers monitor those drones to make sure they're doing their jobs.

<https://www.thedronegirl.com/2023/01/12/wing-remote-operations-center/>



UAS and SmallSat Weekly News

ACC Innovation and Modini partner to build heavy-lift cargo drones 10 January 2023 Press

[Modini Ltd.](#) and [ACC Innovation AB](#) seal their strategic partnership to engineer the heaviest lift drone platform capable of lifting up to **700kg (1,543 lb.)** in a Beyond Visual Line of Sight environment.



This pioneering platform will enable shore-to-ship and ship-to-ship delivery of heavy payloads for the [Royal Navy](#). This collaboration of innovative solution design, RPAS engineering, trials and evaluation and airmanship bring to fruition a solution that can operate in the challenging and unpredictable environment of a moving ship at sea.

Modini CEO, [Nick Sharpe](#) commented “The growing relationship between ACC innovations group and Modini has started to yield fantastic results, as identified by the Royal Navy for the award of this Heavy Lift Challenge. This has been successful by our engineering, integration and operations teams working in harmony with world leading #OEMs to deliver best-in-class drone solutions.”

“ACC Innovation is proud to have been selected by Modini for a strategic partnership to bring a new paradigm to RPAS capabilities for the UK Royal Navy and Future Capability Group. Modini’s professional and experienced organization helps us to bring the most powerful heavy-lift VTOL to the market and we are fully committed to further innovation of the drone industry.” [Claes Drougge](#), CEO, ACC Innovation. https://www.suasnews.com/2023/01/acc-innovation-and-modini-partner-to-build-heavy-lift-cargo-drones/?mkt_tok=NzU2LUZXSi0wNjEAAAGJRIYvAOZKSZuOtdTYAsLmT8zQH7Ug5acSG5ga6AM1Tmbnj7NwhoviuCXKywt9yLivvdbicu5gcrCWQjv8I7Uj6igi7ONh-iXX4G4UJI_C-ow0rGI

FAA grants uAvionix BVLOS approval for Vantis drone network Bruce Crumley - Jan. 10th 2023



Maker of avionics tech for drones and other aircraft, uAvionix has received approval from the [Federal Aviation Administration](#) (FAA) to perform [beyond visual line of sight](#) (BVLOS) flights within North



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Dakota's [Vantis](#) UAV network.

The FAA issued BVLOS authorization to [uAvionix](#) following its demonstration of the risk mitigation and drone detect and avoid capabilities of its avionics tech. It did so on behalf of client Northern Plains UAS Test Site which operates Vantis for North Dakota. The project's objective is to continue developing the statewide aerial network to enable a wide range of commercial and public service UAV operation.

Vantis is **one of seven sites in the US** with [FAA approval](#) to test systems, operating procedures, and on-ground and aerial hardware as a means of integrating UAVs into surrounding airspace – which, in this case, is all of North Dakota.

That coverage makes Vantis **the only statewide** [BVLOS drone network](#) in the country, and explains why NPUASTS relies heavily on sector partners like [uAvionix](#) and air traffic control systems provider Thales to enable safe, incident-free flights across the network.

<https://dronedj.com/2023/01/10/faa-grants-uavionix-bvlos-approval-for-vantis-drone-network/>

13Jan23

LCI's order of up to 40 Elroy cargo drones lifts total book value to over \$2 billion

Bruce Crumley - Jan. 12th 2023



Cargo drone developer [Elroy Air](#) says it has secured the purchase at least 20 of its Chaparral autonomous planes from aircraft and helicopter leasing company LCI, raising the total value of its order book to over **\$2 billion**, according to the company.

LCI [announced](#) it had placed a firm order for 20 of Elroy's vertical takeoff and landing [cargo drones](#), and has taken an option for up to 20 more Chaparral craft. The end-to-end, autonomous logistics and delivery UAVs can carry a maximum **500 lb. of freight up to 300 miles**. The craft is central to [Elroy Air](#)'s integrated, high-throughput autonomous aerial logistics system, and can takeoff, land, on-load, and off-load payloads quickly **with no operator interaction**.

LCI will lease its [Chaparral drones](#) to clients for commercial logistics, disaster relief, firefighting, and other missions, as well as use for cargo transport by [humanitarian organizations similar to Ayr](#), which last year ordered up to 100 Chaparral craft of its own for aid deliveries.



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The lift-and-cruise plane operates using a turbine-based hybrid-electric powertrain for long-[range mission capabilities](#). It can fit into a 40-foot shipping container to be rapidly transported anywhere in the world for immediate deployment.

Elroy says the LCI Chaparral order brings the total for its automated [cargo drone](#) to over 900 craft, or more than \$2 billion. <https://dronedj.com/2023/01/12/lcis-order-of-up-to-40-elroy-cargo-drones-lifts-total-book-value-to-over-2-billion/#more-90170>