



## UAS and SmallSat Weekly News

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**Israel starts fourth phase of ambitious national drone initiative** Bruce Crumley - Dec. 23rd 2021



Israel is nearing the **halfway mark** of its national drone initiative – an ambitious pilot program seeking to test and prepare operational capacities for UAV use in daily life and business.

Israel's **eight-phase** initiative began in January with a series of drone flights over urban areas as part of a plan to inform its evolving regulatory system and create a navigational and operational network that can safely integrate regular activity by ever-rising numbers of drones. This week officials announced the start of the fourth phase with a two-week flurry of UAV sorties over the greater Tel Aviv area. [Previous chapters](#) included a fleet of **20 drones flying more than 300 missions** above the city of Hadera – **per day**.

The purpose of the trials is to “integrate the use of drones in routine activities such as transportation of basic products, first aid; (and) deploying a drone attached to a vehicle for real-time monitoring of traffic movement with AI-based elements that can provide forecasts.”

They bring together private UAV sector companies and public authorities. The latter includes Israel's Avalon Highways and its control center of ground traffic which is now also overseeing a centrally organized network of drone airways.

One of the main objectives is to remove delivery vehicles from city streets with aerial replacements. An estimated 20% of all road congestion in urban centers is created in transporting relatively small goods that could be delivered faster at less expense by UAVs.

By launching the fourth phase – which is slated to continue through next year – authorities are moving to increase both the number of craft and flights involved; diversify the kinds of missions they perform; test and perfect operational systems to manage traffic; and gain the experience and insight that regulators need to draw up appropriate rules – and which sector business can use to hit the air flying as drone services truly take wing. <https://dronedj.com/2021/12/23/israel-starts-fourth-phase-of-ambitious-national-drone-initiative/#more-73905>



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### Embraer eVTOL unit Eve reveals a rash of UAM developments Bruce Crumley - Dec. 23rd 2021



The end of 2021 is proving a busy time for Brazilian plane maker Embraer's urban air mobility unit (UAM) Eve, which in the space of a few hours announced the securing of two major electric vertical takeoff and landing (eVTOL) aircraft orders, as well as its plans to

introducing their stock on Wall Street.

The company announced a pair of deals to deliver a total of **300** eVTOL planes to two separate air transport clients. It followed that up with word of [its plans to](#) list its shares on the New York Stock Exchange that should value it at \$2.4 billion. Embraer is expected to retain an 82% equity stake in the new Eve Holding company, which is expected to be left with **\$512 million in cash** issuing from the deal's total pro forma **equity value of about \$2.9 billion**.

As was the case with sector rivals like Joby, Lilium, Archer, and [Vertical](#), Eve's logic for heading to Wall Street is to raise as much UAM money as possible to finance development of rapidly approaching eVTOL service launches.

Embraer says there are **\$5.2 billion eVTOL aircraft orders** on Eve's books already. Those were increased further with the letters of intent Eve revealed this week signed by two air transport companies securing vehicles for UAM service. The first covers longtime Embraer leasing client Azzora, which has [signed on](#) for **200** aircraft. That was followed by regional airline SkyWest [placing](#) a bid for another **100** planes. <https://dronedj.com/2021/12/23/embraer-evtol-unit-eve-reveals-a-rash-of-uam-developments/#more-73871>

### Royal Navy studying drone use to supply ships far out to sea Bruce Crumley - Dec. 23rd 2021



A century-old unit of the UK's Royal Navy may be getting an aerial makeover examining whether drones can be used to assist the Royal Fleet Auxiliary (RFA) to transport supplies to large naval ships around the globe.

Since it began its work in 1905 supporting Royal Navy ships by replenishing their reserves of fuel, food, spare parts, ammunition, medicine, and



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critical supplies, the RFA has primarily steamed stocks around in large cargo vessels. Now commanders are looking into the feasibility of using autonomous drones to handle smaller but important payloads – possibly up to 100 lbs. – over distances far out to sea.

As has usually been the case in their deployment in myriad public missions and business applications, drones flying RFA supply runs would cost less than current transport methods, cut delivery times, and free up people who currently must oversee and staff ship provisioning runs.

The Royal Navy is relying on the US-UK “special relationship” to quiz American colleagues about their research with drones. Over the summer, the US Navy’s Military Sealift Command ran test flights with the craft carrying 25 lbs. payloads between ships on patrol. Deliveries of those relatively lightweight parts and tools for repair purposes passed its proof of concept objectives and allowed the division to continue exploring broader applications. Royal Navy officials say they are benefiting from what their American colleagues are learning.

<https://dronedj.com/2021/12/23/royal-navy-studying-drone-use-to-supply-ships-far-out-to-sea/#more-73894>

**UK officials seek ways to halt drone live-streaming of horse races** Bruce Crumley Dec 24, 2021 Crumley Dec. 24th 2021



The tumult in the UK over drones live-streaming horse races to provide an advantage to clients in betting rings has reached a new pitch, with clearly displeased and disapproving politicians joining the debate. Their earnest outrage notwithstanding, the desire to thwart the lucrative practice continues to be undermined by a confounding consideration: The activity **isn’t illegal under existing laws**.

Those live feeds are precious to so-called in-running gamblers, who lay wagers as races progress by acting on visual evidence of a horse suddenly surging or fading. Whereas official footage from racetracks is beamed to parimutuel betting businesses **with time delays** of a couple seconds or more, the **UAV streams** go directly to bettor clients **without lags**, offering a short but valuable edge.

This month, the matter was examined by the UK’s upper legislative chamber, the House of Lords. Yet **despite lavish harrumphing** to denounce it, the activity doesn’t appear to have been pushed any closer to lawful interdiction. <https://dronedj.com/2021/12/24/uk-officials-seek-ways-to-halt-drone-live-streaming-of-horse-races/#more-73912>



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**Drones activated to ease flood relief in Selangor** December 25th, 2021 AUFA MARDHIAH/  
pic courtesy of Meraque Services



Over 20 units of drones were deployed to assist flood relief operations including monitoring works and delivery of critical supplies such as medicines, food and power banks in several areas in Selangor. The effort was led by The Ministry of Science, Technology and Innovation through the Special Drone Services Emergency Task Force under the observation of Technology Park Malaysia.

The Unmanned Aerial Vehicle is also equipped with night vision cameras and thermal sensors and has been deployed to Taman Sri Muda, Kampung Lombong, Lanchong, Kampung Lanchang Jaya, Taman Alam Indah, and Kampung Jalan Kebun. The operation was tested in Perak in October this year and proved to be effective in time and cost saving as an alternative such as using boats. The drone is also equipped with night vision cameras and thermal sensors.

The drone services were provided by local drone technology companies such as VStream Revolutions, Meraque Services, Alphaswift Industries, Aerodyne Group and GeoPrecision. Meraque with Pharmaniaga has managed the delivery of medicines using drones in areas affected by the floods in Selangor. [https://themalaysianreserve.com/2021/12/25/drones-activated-to-ease-flood-relief-in-selangor/?\\_cf\\_chl\\_jschl\\_tk=\\_ryBggA5eBJ.2syKc4IYWfzd7HoU752\\_0f4Pj6\\_adVk-1640528556-0-gaNycGzNCKU](https://themalaysianreserve.com/2021/12/25/drones-activated-to-ease-flood-relief-in-selangor/?_cf_chl_jschl_tk=_ryBggA5eBJ.2syKc4IYWfzd7HoU752_0f4Pj6_adVk-1640528556-0-gaNycGzNCKU)

**Navy's new drone, capable of fueling aircraft in flight, undergoes testing on Bush** DAVE RESS DAILY PRESS DEC 25, 2021



*A Boeing unmanned MQ-25 aircraft is craned onto the flight deck aboard the aircraft carrier USS George H.W. Bush for testing during the carrier's recent operations in the Atlantic.*

Aircraft carrier flight decks are busy places with no margin for mistakes, so to make sure a new drone designed to refuel aircraft in flight won't get in the way, the Navy's been running tests on USS George H.W. Bush as it operates in the Atlantic.



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The 50-foot-long MQ-25 drone, which can fly 500 nautical miles carrying a load of 16,000 pounds of fuel, will be **the world's first operational, carrier-based unmanned aircraft**.

Tests on the Bush focused on the MQ-25 deck handling system during day and nighttime operations. Those included taxiing and parking on the flight deck, connecting to the catapult and clearing the landing area. MQ-25 “deck operators” used Boeing’s **new Deck Control Device** — basically, packs that operators carry on their backs and arms, to operate the drone.

As part of the testing, the Navy and experts from Boeing Co. collected simulated launch and landing data with the Joint Precision Landing System, a **new** software-based navigation and approach landing system that automates much of the fancy stick and throttle work. The simulations will help refine the system’s software with data on how motions of a carrier affect landings. [https://www.pilotonline.com/military/dp-nw-bush-tanker-20211225-acdjdvrhb5a7xn7ae6snhuvhom-story.html?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=Today%27s%20Top%20Stories&utm\\_content=6261640461698#nws=true](https://www.pilotonline.com/military/dp-nw-bush-tanker-20211225-acdjdvrhb5a7xn7ae6snhuvhom-story.html?utm_source=newsletter&utm_medium=email&utm_campaign=Today%27s%20Top%20Stories&utm_content=6261640461698#nws=true)

**27Dec21**

### **Drone Delivery Start-Up Zing: Taking the Uber Model to the Sky** Miriam

McNabb December 26, 2021 By Jim Magill



Zing Drones is gearing up to train potential Part 107 pilots in the use of the company’s winch technology developed for use on DJI Inspire 2 drones. At the outset, Zing will employ its own pilots to fly company-owned drones, with the goal of enlisting private drone pilots who will act as independent contractors, using their own drones to make deliveries.

Annase said the company plans sometime next year to hire a regional flight manager to begin the training process. As the company expands its operations into different U.S. cities, additional flight managers would be hired.

“We want the pilots to go through some training with Zing before they start flying with us to make sure they know how to operate the winch,” he said. “The pilots, if they have an Inspire 2 we would be able to attach our piece of hardware to it.” The company, which hopes to begin making commercial deliveries next year, is currently earning revenue through sales of its drone kits, including the winch hardware and the drone.





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Zing **raised \$75,000 last year** in a pre-seed round of funding and is currently raising equity with a crowd-funding campaign through an online fundraising site, a common strategy used by other drone start-up companies. Annase said the company hopes to raise \$100,00 through this method. <https://dronelife.com/2021/12/26/drone-delivery-start-up-zing-taking-the-uber-model-to-the-sky/>

### Hydrogen Fuel Cell VTOL: DJ25 Wins CES Innovation Award [VIDEO] Miriam

McNabb December 26, 2021



[Doosan Mobility](#) and [JOUAV](#) have partnered to develop “**the world’s first hydrogen fuel cell VTOL commercial drone** solution.” The result of their collaboration is the DJ25: winner of a CES 2022 Innovation Award.

South Korean Doosan Mobility has established expertise in hydrogen fuel cell drones. China’s JOUAV has partnered with companies around the world to bring their suite of VTOL air frames to the skies. The DJ25 is the integration of Proton-Exchange Membrane Fuel Cell technology to a VTOL airframe.

The DJ25 has a flight time of up to **5 and half hours**. Able to cover up to 500 km in a single flight, the DJ25 offers an ideal solution for long distance inspections, large scale site surveying, and mapping.

In addition to the environmental benefits, hydrogen fueled UAVs offer improved performance. “Hydrogen-powered drones are stable, easy to maintain, and the vibration reduction improves engine life,” says JOUAV CEO Ren Bin. “The hydrogen fuel cell has an energy density of up to 500 Wh/kg, which greatly enhances the drone’s performance.”

<https://dronelife.com/2021/12/26/hydrogen-fuel-cell-vtol-dj25/>

### Bzzz: Japan-built drone vacuums dangerous wasp nests Bruce Crumley - Dec. 27th 2021



According to a recent [report](#) in Japanese daily *The Mainichi* cleaning equipment rental giant Duskin Co. adapted a vacuum-equipped drone for the purpose of destroying the large wasp nests that regularly appear on structures in its Hyogo Prefecture, about 100 km. west of Kyoto. The company made a video of the UAV’s demonstration flight in November available to the newspaper. The craft uses a trumpet-like



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device to quickly suck up the wasps that humans usually must eliminate manually – at considerable risk to severe stinging.



The marriage of Hoover and drone to take on wasp nests is no trifling development for Hygo Prefecture – or the poor souls usually tasked with confronting the formidable insects.

According to pest control experts in Japan, Hygo led the country in wasp eradication operations between **2016 and 2020 with 4,245** – nearly a fifth of the nation’s total. On average, between 10 and 20 people are killed in Japan each year from wasp stings, often when trying to eliminate nests.

Duskin itself has had to turn down such jobs when wasp colonies became too large – and dangerous – to bust up, or when nests are located too high off the ground. To work around those perils, the company adapted the vacuum-equipped robotics it had developed for battling cockroaches to drones.

Use of the tech not only spares humans the dangerous risks in work, but also avoids [other options](#) like spraying poison, which involve their own human and environmental hazards. <https://dronedj.com/2021/12/27/bzzz-japan-built-drone-vacuums-dangerous-wasp-nests/#more-73971>

**Drone enrages bird lovers after scattering starling murmuration** Bruce Crumley - Dec. 27th 2021



Bird watchers in the UK were outraged at seeing a drone fly in and break up a recurring mass flight phenomenon by starlings known as **murmurations**. The interruption last week near Brighton’s pier was also denounced for the dangers that the craft’s propellers posed to the performing creatures.

The intrusion sparked indignation from people who’d been observing the natural aerial spectacle and were angered to see the drone hover over and scatter the starlings. Several reportedly took to social media to denounce the act and offer up strategies that ranged from verbally accosting invasive UAV operators to “knocking the controller out of their hand.”

Local media accounts say the birds eventually resumed the hypnotic mass swooping – which some people compare to an aerial dance – though that did not alleviate the ire of people who’d





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witnessed the drone's arrival. Even the august Royal Society for the Protection of Birds weighed in to issue a reminder for drone pilots to steer well clear of [bird swarms](#).

Murmurations occur in winter months when tens of thousands – at times over **100,000** – converge on specific areas where they perform synchronized mass flights together as darkness descends. It's thought the collective swoops are in part a defensive mechanism to deter natural enemies like hawks from attacking. See the movie: <https://dronedj.com/2021/12/27/drone-enrages-bird-lovers-after-scattering-starling-murmuration/#more-73934>

**28Dec21**

### **Soaring Eagle BVLOS Waiver Enables Cost-Effective and Efficient Inspections** Miriam McNabb December 27, 2021



Soaring Eagle Technologies has received another FAA Certificate of Authorization. This BVLOS Waiver enables more efficient inspections.

[Soaring Eagle Technologies](#), Houston TX, is a drone data collection company working with critical infrastructure companies across the U.S. Having completed over 60 large scale BVLOS missions across the U.S under SGI (special government interest) waivers, the company currently can currently survey up to 100 miles of electrical transmission line per day with each BVLOS capable small unmanned aircraft system in the company's fleet.

Nathan Alber, Director of Training, says, "As we continue to expand BVLOS operations across the country, clients are able to obtain aerial mapping, inspection, and other imaging data in less time, more efficiently."

"...BVLOS operations means asset owners can save more than 50% when conducting these operations compared to using manned aircraft to do the same work," says the Soaring Eagle press release. <https://dronelife.com/2021/12/27/soaring-eagle-bvlos-waiver-enables-cost-effective-and-efficient-inspections/>



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**HURRICANE IDA: HOW POLICE USED DRONES AFTER THE NATURAL DISASTER** December 19, 2021 Sally French

Drones for good in the wake of natural disasters. Just look to the Cranford New Jersey Police Department and how it deployed drones in the aftermath of Hurricane Ida.



Shortly after the drone program was deployed, Hurricane Ida struck at the end of August 2021. The East Coast was pummeled with severe storms, and massive flooding occurred in southern states including Louisiana before heading north and impacting New York, New Jersey, Connecticut, and Pennsylvania. The storm left millions without power, and flash flooding swept the region.

115 died, and damages resulted in costs of \$65.25 billion.

And in the aftermath of the devastation, the police department turned to drones for a multitude of missions including the quick assessment of flood damage and identification of dangerous or unstable areas. Adorama Business Solutions, which helped Cranford police deploy their drones, said they allowed the department to navigate the disaster in real time, adding that what has historically been a **several-hour** project of mapping and assessing the extent and scale of flooding took about **20 minutes** with a drone.

“The biggest problem was the flooding events,” said Cranford Police Department Captain Guy Patterson. “A vast majority of our streets in our impacted areas weren’t passable. The amount of data we captured quickly using the drones was crucial in managing multiple aspects of our response and recovery and making sure our community was safe and accounted for.”



The drones used by the Cranford Police Department aren’t particularly out of reach for any everyday person to purchase — no fancy specs or custom rigs required. In fact, one drone used by the Cranford Police Department can be purchased at Costco.

<https://www.thedronegirl.com/2021/12/27/hurricane-ida-cranford-drones/>



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### **A New Hybrid Aircraft Is 3 Times Faster Than a Helicopter** Deena Theresa Dec 24, 2021



Revolving around the concept of increasing the safety and convenience of the passenger, this hybrid aircraft can fly three times faster than a helicopter.

“Our aircraft can travel at turboprop speeds and land on nearly any helipad in the world,” Brian Morgan, the COO and EVP of engineering at Vox, [told Robb Report](#). “Like any helicopter, it provides the flexibility and ease of point-to-point travel, but at two to three times the speed, with more comfort and the ability to fly above the weather, all while burning about **half the fuel** of the same-sized rotorcraft performing the same mission,” he said.

How does Vox reach this level of performance? Through four turboprops embedded in the wings to provide lift for takeoffs and landings while offering aerodynamic and safety advantages. A separate rear rotor system produces forward thrust.

The power train will have electric lift rotor assemblies, while still employing turboshaft thrusters for efficient and longer-range flight, thereby achieving the sense of a hybrid model. The battery bank provides about eight minutes of power, with about the same amount of time in reserve. The aircraft recharges in forward flight.

Currently, Vox is exploring SAF and hydrogen options, but starting with conventional fuel, the VTOL will go about **400 miles at 300 knots with an 800-pound load**.

<https://interestingengineering.com/a-new-hybrid-aircraft-is-3-times-faster-than-a-helicopter>

### **Aussie farmer plants (possibly) first-ever sunflower crop using a drone** Bruce Crumley - Dec. 28th 2021



An Australian farmer is celebrating what he believes to be **the world's first** sunflower crop to be entirely planted by a drone.

Queensland farmer and agricultural UAV service provider Roger Woods performed the unprecedented aerial feat in a series of fields near the city of Toowoomba, about 125 km west of Brisbane. “To our knowledge, it’s the first sunflower crop in the world entirely planted by a big agricultural drone that we use commercially,” Woods [told](#) ABC News. “It spreads the seeds, and then fertilized and kept the crop healthy. The only thing it doesn’t do is harvest it.”



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Woods says he's used the craft to spread seeds for growing crops like lucerne, wheat, and barley, but had been warned by peers that UAVs aren't suitable for sunflower planting. Seeds need to be disseminated far enough apart to favor germination while sprouted stalks require sufficient and regular spacing to fully [take root](#) and thrive.

But after 12 test runs to fine-tune his system, Woods carried out his drone flights in September, spreading **45,000 seeds per every 2.5-acre sewn**. His objective was to produce **30,000 sunflower plants** on each of those component zones. <https://dronedj.com/2021/12/28/aussie-farmer-plants-possibly-first-ever-sunflower-crop-using-a-drone/>

**29Dec21**

### **Embraer Urban Air Mobility Company, Eve, Joins NYSE: Promises Flying Cars in 2026** Miriam McNabb December 28, 2021



It makes perfect sense that a leading provider of manned aircraft should enter the arena of passenger VTOLs, flying cars, and urban air mobility. Now, [Embraer](#) urban air mobility spin-off [Eve UAM, LLC](#) has spun off and is joining the NYSE – and promises a vehicle in 2026. The details, according to a press release:

*Eve UAM, LLC, a leader in the development of Urban Air Mobility solutions, has entered into a*

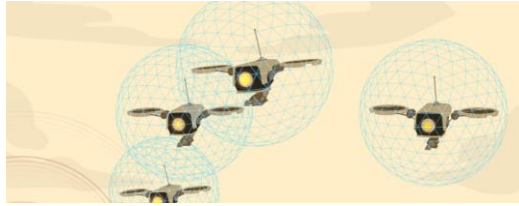
*business combination agreement with Zanite Acquisition Corp., a special purpose acquisition company focused on the aviation sector. Upon closing, Zanite will change its name to Eve Holding, Inc. and will be listed on the New York Stock Exchange under the new ticker symbol, "EVEX" and "EVEXW." Embraer S.A., through its subsidiary Embraer Aircraft Holding, Inc., will remain a majority stockholder with an approximately 80% equity stake.*

The new UAM company will benefit from the strategic partnership with Embraer. "Embraer has contributed its UAM-related assets, employees and IP to Eve." In addition, Embraer has granted Eve a royalty-free license to Embraer's background IP to be used within the UAM market. Eve has access to thousands of Embraer employees on a flexible, priority basis and Embraer's global infrastructure on preferred terms." <https://dronelife.com/2021/12/28/embraer-urban-air-mobility-company-eve-joins-nyse-promises-flying-cars-in-2026/>



## UAS and SmallSat Weekly News

### HOW BIG BUSINESSES FLY DRONES WITHOUT GPS December 28, 2021 Sally French



It's called the Robust Navigation System, and it's a solution designed for drones that could enable them to complete critical missions under GPS-challenged and denied environments.

The system comprises three technologies: GPS anti-jamming technology, an Inertial System, and a Radar Velocity System. They're combined into what its creators claim is the **first-ever** fully resilient navigation system for allowing drones to fly even in GPS-challenged environments.

That project was initially [announced this summer](#) as part of the AUVSI XPONENTIAL 2021 conference in Atlanta, Georgia. And it's already operational.

This Robust Navigation System is a project jointly developed by Honeywell and infiniDome. infiniDome is a GPS Security Company that provides front-end cyber solutions for drones, fleets, and critical infrastructure. Meanwhile, Honeywell Aerospace builds products and services found on a myriad of commercial, defense and space aircraft.

This latest system built by the two companies combines the GNSS-based UAV-tailored Honeywell Compact Inertial Navigation System with infiniDome's GPS anti-jamming technology, integrated with Honeywell's Radar-based Velocity System.

The single system can be installed on almost drone and nearly any standard flight controller. With it, it supposedly is able to provide continuous, accurate navigation data in GNSS-challenged or denied environments. <https://www.thedronegirl.com/2021/12/29/robust-navigation-system/>

### Successful First Flight with BVLOS UAV C2 Radio Mike Ball / 23 Dec 2021



[uAvionix](#) has confirmed that its SkyLink Control & Non-Payload Communications C-band UAV radio has been successfully flight-tested at the Northern Plains UAS Test Site locations south of Grand Forks, North Dakota. The radio, which has been designed to meet the needs of safety-critical and beyond visual line of sight missions as well as operators and manufacturers

looking to certify their drone platforms, was tested at ranges of up to **25 miles**.





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While most UAS still operate on public spectrum such as ISM or 4G, current BVLOS waivers are primarily focused on recovery procedures to deal with the probability of a lost C2 (command and control) link.

uAvionix SkyLink radios and the paired SkyLine application are focused on preventing lost links through software and hardware design, full compliance with Minimal Operational Performance Standards, and a network management system that monitors network and radio link health built to Minimum Aviation System Performance Standards.

The SkyLink C Band radio is fully DO-362A compliant, utilizing key concepts such as the ability to accept dynamic frequency inputs for Frequency Allocation Management, utilizing protected aviation spectrum for a stable and predictable C2 link performance to support BVLOS operations. SkyLink radios are built to anticipated TSO C-213A standards and targeted at customers pursuing airframe certification.

[https://www.unmannedsystemstechnology.com/2021/12/successful-first-flight-with-bvlos-uav-c2-radio/?utm\\_source=UST+eBrief&utm\\_campaign=81e2ef88eb-ust-ebrief\\_2021-dec-29\\_engaged&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-81e2ef88eb-111778317&mc\\_cid=81e2ef88eb&mc\\_eid=acabe18a61](https://www.unmannedsystemstechnology.com/2021/12/successful-first-flight-with-bvlos-uav-c2-radio/?utm_source=UST+eBrief&utm_campaign=81e2ef88eb-ust-ebrief_2021-dec-29_engaged&utm_medium=email&utm_term=0_6fc3c01e8d-81e2ef88eb-111778317&mc_cid=81e2ef88eb&mc_eid=acabe18a61)

## Platform Aero Continues Vanilla UAV Development for Potential Military

**Work** Angeline Leishman December 29, 2021



Veteran-owned small business [Platform Aerospace](#) is planning to advance the development of its [Vanilla family of unmanned aerial vehicles](#) to potentially secure deployment contracts with the Department of Defense.

[Greg Pappianou](#), chief growth officer at Platform Aero, shared in a Defense News interview that the company eyes improvements to three configurations of the UAVs that would fit different military missions.

Platform Aero plans to extend the flight hours and envelope of a Vanilla long-endurance variant, demonstrate **five-day flights carrying** a full payload with a Vanilla multi-payload type and showcase a vertical take-off Vanilla that can fly with **a 50-pound payload** in a day.

Vanilla, which recently [set the over eight-day unrefueled flight world record](#), has already been involved in experiments with U.S. Southern Command, NASA, Naval Air Systems Command and





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Office of Naval Research that tackle airborne payload operations at extended durations.  
[https://blog.executivebiz.com/2021/12/platform-aero-continues-vanilla-uav-development-for-potential-military-work/?\\_wte=robert.rea%40axcel.us&utm\\_source=Ebiz%20Welcome%20Email&utm\\_medium=email&utm\\_campaign=ExecutiveBiz%20Daily%20Headlines%2012.29.2021%20%28UW7eF7%29&kla\\_id=01EN0ENFMACND181VSREZG5QN3&kx=fLFBQb\\_oQZJUyKTHrsATtjXEZqq41jUx0eSlvjsCO0%3D.TBKKxP](https://blog.executivebiz.com/2021/12/platform-aero-continues-vanilla-uav-development-for-potential-military-work/?_wte=robert.rea%40axcel.us&utm_source=Ebiz%20Welcome%20Email&utm_medium=email&utm_campaign=ExecutiveBiz%20Daily%20Headlines%2012.29.2021%20%28UW7eF7%29&kla_id=01EN0ENFMACND181VSREZG5QN3&kx=fLFBQb_oQZJUyKTHrsATtjXEZqq41jUx0eSlvjsCO0%3D.TBKKxP)

**30Dec21**

### **Preventing a Drone Attack on the Pope: D-Fend Solutions Deployed During Open Air Mass** Miriam McNabb December 29, 2021 By Jim Magill



A cyber-based, drone-takeover system developed by Israeli/U.S.-based counter-drone technology company, [D-Fend Solutions](#), recently thwarted a potential drone attack on an open-air mass in Slovakia, celebrated by Pope Francis and attended by an estimated crowd of 60,000 worshippers.

During the incident, which took place in September, the company deployed its proprietary [EnforceAir technology](#) to detect the presence of an unidentified drone, and then to locate and track it and take it over, **forcing it to land at its takeoff point**, thus mitigating any potential threat.

“The drone was fended off without any disruption to the mass itself, so continuity prevailed, and a potential incident became a non-incident,” Jeffrey Starr, D-Fend Solutions’ chief marketing officer, said in an interview.

The EnforceAir system allowed the Slovakian security forces charged with protecting the Pope, 90 bishops, 500 priests and other VIPs attending the mass, to take control of the unidentified drone, and bring it down safely, in a way that other counter-drone systems are unable to do, Starr said. <https://dronelife.com/2021/12/29/preventing-a-drone-attack-on-the-pope-d-fend-solutions-deployed-during-open-air-mass/>

## Florida Approved Drones: Is This the List for State Use and Purchases? Miriam

McNabb December 29, 2021



A short list of Florida approved drones for state use and purchase has caused some confusion and concern in the Florida public safety community.

Early this morning, the [Florida Department of Management Services](#) published a list of Florida approved drones: Skydio, Parrot, Altavian, Teal, and Vantage Robotics. However, since publication this morning, the page has been

locked, leading to questions about the validity of the publication and the Department's plans for implementation.

The list mimics the original [Blue sUAS list](#) of trusted and secure drone platforms. The original Blue sUAS list mentioned five specific drone models built in collaboration with the Department of Defense, including the U.S.-manufactured ANAFI USA developed by French drone company Parrot. The Florida list appears to refer to any products produced by these five manufacturers, whether or not produced in the U.S. <https://dronelife.com/2021/12/29/florida-approved-drones-is-this-the-list-for-state-use-and-purchases/>

## ASKA invites CES 2022 visitors to strap into its Drive and Fly cockpit Bruce Crumley -

Dec. 30th 2021



Silicon Valley startup [ASKA](#) is inviting all interested visitors to stop by its CES 2022 stand in Las Vegas and get a glimpse and feel of combined road-air travel of the future by settling in behind the commands of its electric vertical takeoff and landing Drive and Fly.

The company says it has assembled a full-size concept model of the cockpit and dashboard that will offer people a simulated experience of the car-aircraft. The company calls the creation of the prototype module a **technological milestone** in the air mobility sector, one it feels significantly advances its efforts to create a dually functional land and air vehicle.



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ASKA is working to create a complete prototype of the craft for demonstration flights sometime in 2022. It plans to begin marketing the road-air vehicle in 2026.



ASKA's four-seat Drive and Fly is designed to navigate roadways with its wings and rotors folded above the roof, then expands those horizontally for either vertical or short-space takeoff and landing. Its maximal flight range will be 250 miles, and "driving" the craft through the sky will

require a pilot's license – and \$729,000 to buy it. <https://dronedj.com/2021/12/30/aska-invites-ces-2022-visitors-to-strap-into-its-drive-and-fly-cockpit/>

## Autel EVO Lite, Nano drones are finally here; shipping begins mid-January

Ishveena Singh - Dec. 30th 2021



The first shipment from Autel Robotics' new drone series, EVO Lite and EVO Nano, has finally arrived in North America today. Originally announced in September 2021, the drones will now be displayed for the first time in public at the upcoming CES technology industry trade show in Las Vegas.

With the holiday season already underway, the drone maker has now issued a statement saying that the first batch of EVO Lite+ would arrive at the US warehouse on Dec. 30, 2021, and that it will be shipped to distribution partners within a few days. All EVO Nano and Lite series products will be available at [B&H Photo](#), Best Buy, and [Adorama](#).

Autel's new drones promise amazing video quality (up to 6K for the Lite+), a wide image transmission range of 7.4 miles, impressive battery life of up to 40 minutes (EVO Lite series), and advanced features such as vision sensors for smart obstacle avoidance. Color options include the signature Autel Orange, Blazing Red, Arctic White, and Deep Space Gray.

<https://dronedj.com/2021/12/30/autel-evo-lite-nano-drone-shipping-us-canada/>



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### Drone Industry 2021 in a Word: We Asked Our Partners to Describe This Year in Drones

Miriam McNabb December 30, 2021



As we look forward to 2022, it's time to reflect on the drone industry 2021. Despite chip shortages, new regulations, an ongoing global pandemic, and the challenges inherent in a growth sector, the drone industry came out on top in 2021. We asked our sponsors and partners to describe the drone industry 2021 in a word (or two) – and here's what they said.

**Inflection Point.** Brett Kanda, drone industry veteran and VP of Sales and Marketing

at [BRINC Drones](#), makers of [drone solutions for law enforcement and first responders](#), says the industry is shifting. "2021 was an inflection point in our industry. What we have been seeing and feeling for years is starting to bleed over to the end users in terms of ROI, value proposition, and capabilities for autonomous systems."

**Booming.** "We have seen an incredible increase of companies looking to start utilizing UAS in day-to-day operations and companies currently with UAS advancing their operations," says Kyle Miller, Director of Business Development for [Censys](#).

**Coiled – Like a Snake!** [Commercial UAV](#)'s Carl Berendtson says, "Held back by external forces, but building momentum none the less, beneath the waves. BVLOS will be the catalyst to release the hounds."

**Accelerated.** For major drone retailer [Drone Nerds](#), 2021 has been a year of growth and evolution. "In one word, accelerated – we've seen continued growth in the consumer market and tremendous growth in the adoption of drone technology for the commercial market. It's incredibly rewarding to see this accelerated growth," says Drone Nerds CEO Jeremy Schneiderman.

**Ready.** For [Heisha Tech](#), makers of battery charging and [automation solutions for COTS drones](#), 2021 was a great year – and they expect 2022 to be even better. CEO Lu Ling says, "We see more companies entering the market to launch new products and more customers purchasing



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as BVLOS regulation is loosened around the world, and 5G drones will create a fast lane for the industry.”

**Actionable.** [Optelos](#) provides data management solutions designed to [make drone data more valuable](#) to enterprise clients. In 2021, the drone industry moved to a new focus on value and actionable insights, says Chief Revenue Officer Edward Sztuka. “Companies are going beyond the unstructured data generated by drones and increasingly seeking to transform that data into “actionable” insights to deliver meaningful breakthroughs to their customers.”

**Maturing.** [SimActive](#), developers of the [Correlator 3D™ suite of software](#), provides photogrammetry solutions for a wide range of industries including surveying, construction, agriculture, forestry, and mining. Dr. Philippe Simard, SimActive President, says customers are getting more value from drone programs. “The technology is becoming mature with sophisticated sensors such as LiDAR being used more and more.”

**Specialization.** [Skyfish](#) is a U.S.-based manufacturer of [precision drone solutions](#). Orest Pilskalns, CEO of Skyfish, says “The commercial drone industry use cases are becoming much more defined and verticalized. The value of ‘engineering-grade’ drone photogrammetry is being recognized.”

**Evolution.** [Teledyne FLIR](#) makes the thermal sensors that drive a large and growing area of commercial drone use. Kelly Brodbeck, Teledyne FLIR Product Management Executive. Says, “Missions and technology are evolving together with features such as improved thermal imaging performance and functionality along with reduced weight, size, and cost. “The alignment of needs and capabilities are supporting safer and more successful life-saving missions and more efficient industrial inspections.”

**Emergence.** Dr. Will Austin, President of [Warren County Community College](#), says, “2021 illustrated a remarkable emergence for the drone industry, as the pandemic provided time for many of the technology goals to be realized; now we just need the regulators back in 2022 to catch up with industry goals and all the newly realized AI enhancing the systems. It is likely that the drone industry will be recognized in future years as the entrepreneurial enterprise that allowed us to roar back to a new normal.”

**Unpredictable.** Finally, our friend Sami Sarkis, the brilliant artist behind the [HosiHo Aerial Images](#) site, summed it up beautifully: “*It was the most hectic, erratic, unpredictable year we have ever had, but ultimately the best since 2014.*” <https://dronelife.com/2021/12/30/drone-industry-2021-in-a-word-we-asked-our-partners-to-describe-this-year-in-drones/>