UAS and SmallSat Weekly News

Contents

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26Nov22

FAA To Add Powered-lift Aircraft to Air Carrier Category Charles Alcock - November 22, 2022

The FAA is proposing changes to its definitions covering air carriers to create scope for including new powered-lift aircraft such as eVTOL models in existing operational rules. On November 21, the agency issued a notice of proposed rulemaking covering changes allowing it to determine on what terms powered-lift aircraft that can't be categorized as airplanes or rotorcraft could be regulated for air carrier operations, including scheduled airline services and on-demand charter.

"This powered-lift definitions rule lays the foundation that will allow operators to use powered-lift aircraft," the agency said. "This is important because our regulations have to cover powered-lift aircraft for them to be able to operate commercially."

In tandem with this initiative, the FAA is developing rules for certifying pilots for powered-lift aircraft and new operational requirements. It said these proposed rules should be published in the summer of 2023 and will be finalized in time for the first eVTOL aircraft to complete type certification.

Last week, FAA acting Administrator Billy Nolen indicated that eVTOL commercial operations could start in early 2025. Major commercial carriers including United Airlines and American Airlines have plans to operate four-passenger eVTOL aircraft to carry customers to and from hub airports. https://www.ainonline.com/aviation-news/air-transport/2022-11-22/faa-add-powered-lift-aircraft-air-carrier-category

Air Taxis Clear One Regulation Hurdle 22 November 2022

A Volocopter 2X prototype completes a test flight near Helsinki International Airport in 2019.

BBC News reports that the FAA said on Monday that "it was proposing to expand its definition of the machines it considered air carriers from airplanes and helicopters, adding 'powered lift' to the list." This is a big step forward in the regulation clearance for commercial air taxis, but the rules "now face a period of public comment before they can go into effect." The agency also

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"said it expected to publish proposed rules for operating such aircraft in summer 2023. Those rules will outline in more detail the criteria that firms will need to meet to license pilots and launch their operations." https://www.aiaa.org/news/news/2022/11/22/air-taxis-clear-one-regulation-hurdle

DJI Black Friday deal brings Mini drone combo to under $300 Ishveena Singh - Nov. 25th 2022

The DJI Mavic Mini Fly More drone combo is down to its all-time-low price of $299.99 in a rare Black Friday 2022 deal.

Editor's note: *The limited-time deal on Mavic Mini is now expired, but you may want to check out $120 Black Friday savings on the Mini 3 Pro Fly More combo.*

Typically priced at $499, but more recently hovering at $399, the sub-250-gram Mavic Mini drone combo is available for less than $300 for a limited time on Amazon.

Despite newer models being available, the Mavic Mini fulfills all the basic requirements of a first-time drone buyer: a reliable, long-range, beginner drone that doesn't break the bank. The travel-friendly flying camera shoots video at up to 2.7K resolution at 30 fps, and 1080 at 60fps. It can achieve up to 12MP images. The Mini's camera is mounted on a stabilized three-axis gimbal. And sophisticated flight modes ensure that you can capture complex cinematic shots with just a tap in the DJI Fly app. The drone offers up to 30 minutes of flight time on a full battery charge. It comes with must-have accessories like an extra pair of batteries and spare propeller blades. https://dronedj.com/2022/11/25/dji-black-friday-deal-mini/

New firmware for DJI's M300 RTK drone, further enhancing its flagship UAV

Bruce Crumley - Nov. 25th 2022

Drone giant DJI has just released a firmware upgrade for its flagship Matrice 300 RTK series (M300) enterprise drone, which also covers associated accessories, and enables Remote ID to satisfy US regulations.

DJI introduced its M300 RTK drone as both a rugged UAV capable of taking on particularly exacting missions, but one that also packs enough

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sophisticated tech to come away with truly refined and precise data troves. The company fulfilled its objective out of the gate, and has repeatedly improved upon its creation with successive, capability-enhancing hardware additions.

New feature-adding firmware upgrades have also been part of that, and those continue with the current update. The package includes bringing the drone into compliance with US Remote ID requirements – meaning once the new software has been installed, it cannot be replaced with earlier versions.

DJI's repeated enhancement efforts have made the M300 not only the standard for deployment in firefighting, search and rescue, law enforcement operations but also a range of enterprise uses including infrastructure inspections, geomatics, and specialized mapping and surveying work. In fact, many users of the M300 RTK say DJI's remarkably reliable, adaptable, and powerful drone has no other rival matching its performance brawn and tech brains.
https://dronedj.com/2022/11/25/new-firmware-for-djis-m300-rtk-drone-further-enhancing-its-flagship-uav/

Lilium Raises $119 Million For eVTOL Development Kate O'Connor November 24, 2022

Germany-based electric vertical take-off and landing (eVTOL) aircraft developer Lilium has raised $119 million in capital from its existing shareholders, new investors, and strategic partners. Companies participating in the capital raise included Honeywell, Aciturri, LGT, Tencent and B. Riley Securities. Lilium stated that it plans to use the money to continue to fund its operations, develop the Lilium Jet and for general corporate purposes.

Lilium began flight testing in 2017 with a two-seat eVTOL prototype and got a five-seat model in the air in 2019. The seven-seat Lilium Jet, for which the company has received a CRI-A01 certification basis from EASA, was introduced in 2021. Designed for regional air taxi and freight services, the seven-seat Lilium Jet is expected to have a top speed of up to 300 km/h (162 knots) and be capable of routes between 40 and 200 km (22-108 NM) at launch.
https://www.avweb.com/recent-updates/evtols-urban-mobility/lilium-raises-119-million-for-evtol-development/?MailingID=1137&utm_source=ActiveCampaign&utm_medium=email&utm_content=FAA+Proposes+Adding+Powered-Lift+To+Air+Carrier+Definition%2C+International+Air+%26+Space+Hall+Of+Fame+Inducts+Class+Of+2022&utm_campaign=FAA+Proposes+Adding+Powered-

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28Nov22

Rocket Lab to launch remaining NASA TROPICS satellites

Jeff Foust — November 25, 2022

WASHINGTON — NASA has selected Rocket Lab to launch the remaining four cubesats of a constellation to monitor tropical weather systems after the first two were lost in an Astra launch failure.

NASA announced Nov. 23 that it awarded a task order to Rocket Lab through the agency's Venture-class Acquisition of Dedicated and Rideshare contract for the launch of the satellites on two Electron vehicles scheduled for a 60-day period no earlier than May 1, 2023. That schedule would allow the satellites to be ready for the 2023 Atlantic hurricane season.

NASA originally awarded a $7.95 million contract to Astra for launching six of the Time-Resolved Observations of Precipitation structure and storm Intensity with a Constellation of Smallsats on three of the company's Rocket 3.3 vehicles. Although each TROPICS satellite is only a 3U cubesat, the three launches were needed to place the satellites into three orbital planes for improved revisit times. https://spacenews.com/rocket-lab-to-launch-remaining-nasa-tropics-satellites/

Automated Drone Operations: Frequentis Partners with Austrian Federal Railways

Miriam McNabb November 27, 2022 by DRONELIFE Staff Writer Ian M. Crosby

Austrian Federal Railways (ÖBB), one of Europe's safest and most reliable railways, has signed an innovation partnership with Frequentis for the research of hangar-based automated drone flights in Austria.

The partnership will focus on the prevention of railway incidents using routine maintenance flights. These flights will be able to detect damage to infrastructure and potential hazards before accidents occur.

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To contend with the challenges of implementing Beyond Visual Line of Sight (BVLOS) flights, the partnership will seek to enhance the understanding of automated drone flights and their restrictions such as regulations, weather, and topography. Future BVLOS flights will be conducted in line with all regulations and tested in a variety of railway-related scenarios. The partners are additionally exploring the utilization of digitalized railway operations to organize for the approval of BVLOS flights and to obtain experience handling them through a trial operation that will take place over the course of the next 12 months.

The trial will provide Frequentis with the opportunity to gather knowledge surrounding availability, stability, regulatory requirements, and possible applications of drone hangars, all of which will be leveraged to establish a basis for additional innovations within the drone technology sector. https://dronelife.com/2022/11/27/hangar-based-automated-drone-operations/

DJI Agriculture Launches Mavic 3 Multispectral: Safety and Portability in the Field Miriam McNabb November 27, 2022

In another version of the Mavic 3, DJI Agriculture has launched the Mavic 3 Multispectral for precision agriculture.

DJI Mavic 3 Multispectral carries a multispectral imaging system to collect the data used for crop monitoring. “Mavic 3 Multispectral is a must-have solution for a broad scope of application scenarios in the fields of precision agriculture and environmental monitoring.”

The Mavic 3 Multispectral is more portable than most drones for precision agriculture, weighing 951 grams and designed to fold and fit into an ordinary bag. It uses a two-in-one camera system equipped with a 4/3-inch CMOS and 20MP image sensor and mechanical shutter with a maximum speed of 1/2000. It manages high-speed continuous filming at the fastest interval of 0.7 seconds and can quickly collect image information.

In addition to the RGB camera, a four-lens multipectral camera provides more accurate directional information, helping users gain a deeper understanding of crop conditions by sensing details that the human eye cannot detect. https://dronelife.com/2022/11/27/dji-agriculture-launches-mavic-3-multispectral/

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Dronamics awarded 2.5 million Euros grant for its cargo drone mobility solution

November 28, 2022 News

Dronamics, the world's first cargo drone airline with a license to operate in Europe, today announced that it has been awarded a €2.5 million grant by the European Commission under the prestigious European Innovation Council Accelerator program. The EIC has also expressed a commitment to support Dronamics' upcoming Series A round.

Dronamics aims to democratize air freight, by enabling affordable, and sustainable same day delivery for businesses and communities everywhere, especially remote and under-served areas. Dronamics was selected as one of the few companies awarded funding by the EIC Accelerator program, which had nearly 1,000 candidates.

Dronamics is the world's first cargo drone airline. As a leading developer and operator of large, long-range drones built specifically for cargo, its flagship Black Swan can carry 350 kg (770 lb) at a distance of up to 2,500 km (1,550 mi) up to 80% faster, 50% cheaper and with up to 60% lower emissions than alternative modes of transport, including airfreight. https://uasweekly.com/2022/11/28/dronamics-awarded-2-5-million-euros-grant-from-the-european-innovation-council-for-the-roll-out-of-its-cargo-drone-mobility-solution/?utm_source=rss&utm_medium=rss&utm_campaign=dronamics-awarded-2-5-million-euros-grant-from-the-european-innovation-council-for-the-roll-out-of-its-cargo-drone-mobility-solution&utm_term=2022-11-28

Volatus Aerospace Expands to US Market with Acquisition of Empire Drone Company November 28, 2022 News

Volatus Aerospace Corp. announced today that it has signed an arm's length definitive agreement to acquire Syracuse-based Empire Drone Company LLC., one of North America's fastest-growing distributors and integrators for unmanned aerial systems.

With Fortune Business Insights projecting the commercial drone market to grow to $47.38 billion by 2029 at a CAGR of 28.58%, the addition of Empire Drone in the USA positions Volatus to add to its growing global presence for green drone

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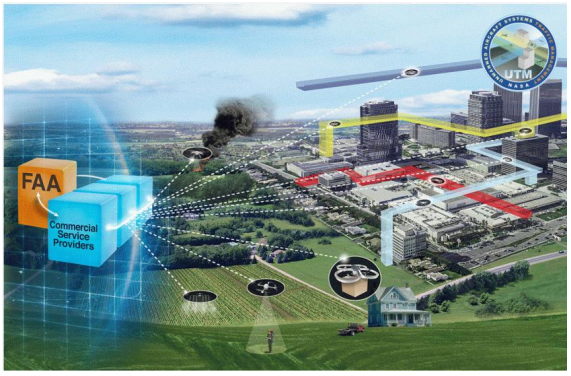
technologies, which includes Volatus Aerospace LATAM in South America, Omniview Tech in Canada, and iRed Remote Sensing in the UK.

Empire Drone is expected to generate revenue of C$2.5M in 2022 with a 6% EBITDA. Under the terms of the agreement, Volatus will purchase 100% of the company for a cash of $300,000, equity of $350,000 with a minimum floor price of $0.65, and earn out of $350,000 paid in equity after one year based on the 30-day volume weighted average price (VWAP) with a minimum floor price of $0.65 per share and assume the long-term debt of $225,000.
https://uasweekly.com/2022/11/28/volatus-aerospace-expands-product-distribution-to-us-market-with-acquisition-of-empire-drone-company/?utm_source=rss&utm_medium=rss&utm_campaign=volatus-aerospace-expands-product-distribution-to-us-market-with-acquisition-of-empire-drone-company&utm_term=2022-11-28

NASA Ames issues industry feedback request on its urban air mobility UTM concept November 22, 2022 Philip Butterworth-Hayes



NASA's Ames Research Centre has issued a request for information from industry for comments and feedback on its proposals for a Discovery and Synchronization Service (DSS) that satisfies Urban Air Mobility (UAM) requirements.

The RFI was published on November 21, 2022 with a response date of January 6 2023.

"Ultimately, NASA intends to procure an initial prototype and necessary engineering support required to maintain it for a period of time."

NASA's objective is to have industry provide a solution for the DSS that satisfies UAM requirements. Understanding that this is a research effort, and some requirements are expected to change or new ones identified in the future, NASA intends to procure an initial prototype and necessary engineering support required to maintain it for a period of time.
https://www.unmannedairspace.info/uas-traffic-management-tenders/nasa-ames-issues-industry-feedback-request-on-its-urban-air-mobility-utm-concept/

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Pacific Group Bets on Urban Air Mobility in Vietnam, Pre-Orders SkyDrive's Passenger eVTOL Miriam McNabb November 28, 2022

SkyDrive Receives Pre-Order of up to 100 Flying Vehicles from Pacific Group

Renewable energy investment group Pacific Group Co Ltd is making a bet on urban air mobility in Vietnam, signing an MoU with Japanese eVTOL manufacturer SkyDrive Inc.

Pacific Group has pre-ordered 10 SkyDrive SD-05 passenger aircraft, and has placed a conditional pre-order option for up to 90 flying vehicles. "Pacific Group has also agreed to explore sustainable and easily accessible new mobility solutions, focused on the use case of SkyDrive's SD-05 flying vehicles, in the Vietnamese market," says the press release.

eVTOLs and urban air mobility make a lot of sense for Vietnam's congested cities, with their iconic crowded streets. SkyDrive and Pacific Group will work together on a project to evaluate the use and infrastructure requirements to implement urban air mobility in Vietnam: including vertiports, route and network planning, and regulatory challenges.
https://dronelife.com/2022/11/28/urban-air-mobility-in-vietnam/

Airbus Produces 2,000th Target Drone Kate O'Connor November 29, 2022

The 2,000th target drone produced by Airbus Defence and Space's Target Systems & Services has rolled off the production line in Friedrichshafen, Germany, the company announced on Monday. Target drone number 2,000 is a Do-DT45 model intended for use in a military training exercise with Airbus partner Andøya Space Defence. Launched by ramp, the target drone is designed to simulate high speed targets, offering a top speed of 440 knots and climb capabilities up to 25,000 feet.

According to Airbus, its target drones have been used for military training for more than 20 years now. Alongside the Do-DT45, Airbus Target Systems & Services produces the Do-DT55 for

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simulating anti-radar missiles, Do-HT05 to represent combat helicopters, and Do-DT25 to mimic fighter jets, drones and cruise missiles. The company noted that its Do-DT series can also be outfitted with sensors and data links for testing interactions between uncrewed and crewed aircraft or autonomous air-to-air refueling technology. https://www.avweb.com/aviation-news/military-aviation/airbus-produces-2000th-target-drone/?MailingID=1139&utm_source=ActiveCampaign&utm_medium=email&utm_content=Rolls-Royce+Runs+AE+2100+Engine+On+Hydrogen%2C+Mars+Helicopter+Completes+34th+Flight&utm_campaign=Rolls-Royce+Runs+AE+2100+Engine+On+Hydrogen%2C+Mars+Helicopter+Completes+34th+Flight+-+Tuesday%2C+November+29%2C+2022

Rocket Lab to Help NASA Deploy CubeSats for Tropical Cyclone Observation Effort NAOMI COOPER NOVEMBER 28, 2022

Rocket Lab (Nasdaq: RKLB) will help NASA send four small satellites to low-Earth orbit for a storm observation initiative via two Electron launch missions under the Venture-class Acquisition of Dedicated and Rideshare contract vehicle.

The Time-Resolved Observations of Precipitation Structure and Storm Intensity with a Constellation of Smallsats mission could launch no earlier than May 1, 2023, ahead of the Atlantic hurricane season to support storm modeling and prediction efforts, the agency said Wednesday.

NASA intends for the TROPICS constellation to collect data on the formation and evolution of tropical cyclones, storm intensity and the vertical and horizontal structures of storm temperature and humidity. https://www.govconwire.com/2022/11/rocket-lab-to-provide-cubesat-launch-services-for-nasa-tropics-mission/

Liquid Hydrogen Fuel System for UAS Demonstrated Mike Ball / 29 Nov 2022

GKN Aerospace has confirmed that it has successfully delivered a ground-based demonstrator of a liquid hydrogen aircraft fuel system. The demonstrator was designed, built, and tested in collaboration with Filton Systems Engineering, under the Innovate UK-funded Safe Flight project. The goal of the project was to investigate the feasibility of using a liquid hydrogen fuel source to increase the endurance of a search and rescue uncrewed aerial system (UAS) concept.

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The project enabled GKN to understand and address many of the safety concerns raised by the introduction of such a novel fuel. Integrated fuel tank design and distribution solutions were developed, including vaporization and conditioning of the liquid hydrogen. The performance of the fuel system was verified by coupling it with a proton exchange membrane fuel cell stack, representative of the type that could be installed on a future zero emission aircraft. The project demonstrated successful storage and management of liquid hydrogen, supplying the fuel cell power system with hydrogen at the required temperature and pressure over a range of electrical loads typical of a UAS search and rescue mission.
https://www.unmannedsystemstechnology.com/2022/11/liquid-hydrogen-fuel-system-for-uas-demonstrated/?utm_source=UST+eBrief&utm_campaign=5b210b4e32-ust-ebrief_2022-nov-29&utm_medium=email&utm_term=0_6fc3c01e8d-5b210b4e32-119747501&mc_cid=5b210b4e32&mc_eid=0d642a9d48

DJI Achieves Encryption Recognition from U.S Department of Commerce

November 29, 2022 News

DJI, the world's leader in civilian drones and aerial imaging technology, today reinforces its commitment to customer data and privacy with the validation of the DJI Core Crypto Engine. The engine is a firmware hybrid cryptographic module which provides foundational security services for the entire platform, including cryptography, key management, platform identity, secure boot, and secure Life Cycle State.

Formally validated by the U.S. and Canadian Governments, FIPS 140-2 compliance has been widely adopted around the world in both governmental and non-governmental sectors as a practical security benchmark and realistic best practice. The standard ensures that the hardware validated meets specific security requirements.

From this point on, all DJI drones containing the DJI Core Crypto Engine ensure that whether flown for leisure or operated for business, customers are treated to trusted, authoritative and globally recognized security standards. This is particularly key for enterprise or government customers requiring this specification and additional peace of mind.
https://uasweekly.com/2022/11/29/dji-achieves-encryption-recognition-from-u-s-department-of-commerce/?utm_source=rss&utm_medium=rss&utm_campaign=dji-achieves-encryption-recognition-from-u-s-department-of-commerce&utm_term=2022-11-29

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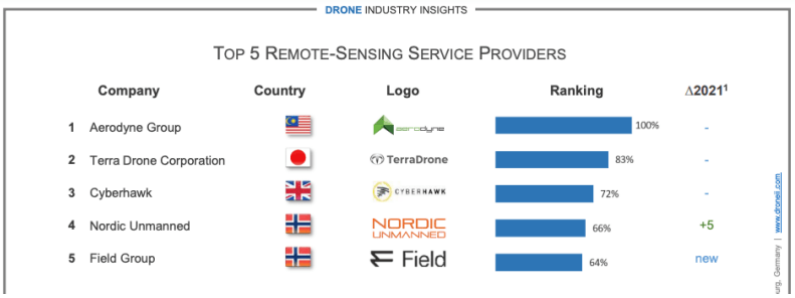
30Nov22

THE BIGGEST DRONE SERVICE PROVIDERS OF 2022

November 14, 2022 Sally French News

DJI is certainly the world's biggest drone maker, but who are the biggest companies operating drones? German-based drone industry analysis company Drone Industry Insights ranked the top drone service providers of 2022 to find out.



DII's report, released in November 2022, analyzed 850 drone companies worldwide, considering metrics including employee size, growth and public attention to define the top drone service providers of 2022. When it comes to remote-sensing service providers here were the top five biggest ones:

1. Aerodyne Group (based in Kuala Lumpur)
2. Terra Drone Corporation (based in Japan)
3. Cyberhawk (based in the United Kingdom)
4. Nordic Unmanned (based in Norway)
5. Field Group (based in Norway)

The top three remote sensing drone companies – Aerodyne, Terra Drone and Cyberhawk — were also the top three last year in DII's list of top drone service providers of 2021 and in 2020, though their order has slightly switched, with Aerodyne rising up to the top this time around.

Aerodyne positions itself as a one-stop-shop for getting you actionable aerial data, promising to plan flights, actual run them, help you comply with regulatory requirements, develop the method statement, perform job safety analysis and risk identification.

And Aeroodyne has been rapidly growing, reportedly with double the number of employees of second-place Terra Drone, according to DII. That's no small feat, considering Terra Drone itself is huge, having accumulated $85 million of investment spread across five deals since its inception in 2016. https://www.thedronegirl.com/2022/11/30/the-biggest-drone-service-providers-of-2022/

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Phantom Space Receives 4 NASA CubeSat Launch Task Orders JAMIE BENNET NOVEMBER 29, 2022

Phantom Space has received task orders under NASA's Venture-class Acquisition of Dedicated and Rideshare contract vehicle to send research nanosatellites into space with the use of a company-designed launch vehicle beginning in 2024.

The company's Daytona rocket will carry the payloads on four CubeSat Lunch Initiative missions, the agency said Friday. Arizona-based Phantom Space was among the 13 companies selected to participate in the VADR program in January.

Daytona is designed with two stages to transport 990 pounds of payload to low-Earth orbit and will be powered by Hadley engines from Ursa Major.

According to Phantom, the second and fourth flights will each carry two of the satellites, which will take off at Vandenberg Space Force Base in California.
https://www.govconwire.com/2022/11/phantom-space-receives-four-nasa-cubesat-launch-task-orders/

Drone Deliveries May Be Taking A Giant Baby Step Forward Mark Phelps November 29, 2022

DroneUp, founded in 2016 by CEO Tom Walker and based in Virginia Beach, Virginia, recently announced a partnership with Walmart to expand modestly sized drone delivery services to six states. DroneUp does not manufacture its vehicles, but rather uses third-party products with an eye toward tailoring its services to the clients' specific needs, Walker said. According to an article on fastcompany.com, DroneUp's customers reportedly include the likes of Brookfield Properties, Quest Diagnostics, NATO Allied Command—and now Walmart, in an expanded capacity.

In 2021, DroneUp provided on-demand deliveries at three locations in the retail giant's home state of Arkansas. That partnership has now expanded to include locations in Arizona, Florida, Texas, Utah and Virginia. Certified pilots operate within FAA guidelines between 8 a.m. to 8 p.m. from delivery hubs at participating Walmart stores seven days a week.
https://www.avweb.com/aviation-news/drone-deliveries-may-be-taking-a-giant-baby-step-

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Vports and Syracuse Airport create first international advanced air mobility corridor Megan Hatch Nov 29, 2022

SYRACUSE, N.Y. (WSYR-TV) — The Syracuse Hancock International Airport is partnering with Québec-based world leader in advanced Air Mobility (AAM), VPorts, to build the first international electric AAM corridor that will support electric vertical take-off and landing (eVTOL) aircraft.

VPorts, along with the Syracuse Hancock International Airport, NUAIR (Northeast UAS Airspace Integration Research Alliance, Inc.), Aéro Montréal, Innovitech, the Unmanned Aerial System Centre of Excellence (Alma), and Helijet International, have all signed a Memorandum of Understanding to establish international electric AAM corridors between Québec (Canada) and the United States.

The corridor will provide a platform for full commercial transport of cargo and people using eVTOL aircraft (large, helicopter-sized “drones”).

The international electric AAM corridor will be built between the Syracuse Airport and VPorts’ vertiport or area designated for the takeoff and landing of eVTOLs, in Mirabel, Canada.

The first test flights are planned for 2023. https://www.localsyr.com/news/local-news/vports-and-syracuse-airport-create-first-international-advanced-air-mobility-corridor/#:~:text=SYRACUSE%2C%20N.Y.,and%20landing%20(eVTOL)%20aircraft.

$100K up for grabs in 2023 FAI World Drone Racing Championship Ishveena Singh - Nov. 30th 2022

The Fédération Aéronautique Internationale, or FAI, has selected South Korea as the host of the 2023 World Drone Racing Championship. The competition, the biggest of its kind, comes with a prize pool of $100,000.

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The tournament will see the world's best drone pilots pit their skills against one another after a three-year gap caused by the pandemic. The races are set to take place from October 6-9, 2023, at the Chunhyangol Stadium in Jeollabuk-do — which is some two hours south of the capital city of Seoul.

FIA explains that the organizing duties will be shared by the Korea Aero Models Association and the Federation of Korea Aeronautics to ensure top-quality arrangements for the competitors and spectators alike.

In addition to the main drone racing competition, other side events will include the FAI Drone Soccer competition and a drone conference to increase the exposure of the event attendees to the infinite world of drones. An array of cultural activities and music concerts are also being planned. https://dronedj.com/2022/11/30/fai-drone-racing-championship-2023/#more-89067

European Union adopts Drone Strategy 2.0 to accelerate UAV use Bruce Crumley - Nov. 30th 2022

The European Commission is moving to accelerate the use and diversification of UAV services across the European Union (EU) with the adoption of its Drone Strategy 2.0, which, in addition to tapping into what's expected to be a vigorous growth area, seeks to reduce the opportunities for malevolent actors to abuse the technology.

The European Commission, which serves as the executive body of the EU introduced its Drone Strategy 2.0 during a two-day event in Brussels to promote UAV development. That Drone Days conference permits government officials, regulators, businesses, and interested members of the public to learn more about how the 27-nation bloc plans to promote emerging aerial activities in the coming years.

The adoption and presentation of the EU's Drone Strategy 2.0 establishing guidelines was an anticipated part of the wider series of speeches and discussions. The cornerstone document sets the operating and the technical requirements of drone use as member states encourage large-scale commercial UAV operation across a wide range of sectors. https://dronedj.com/2022/11/30/european-union-adopts-drone-strategy-2-0-to-accelerate-uav-use/#more-89080

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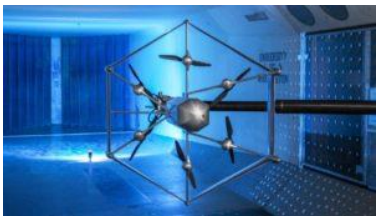
Newest Model of Amazon Delivery Drone Revealed Miriam McNabb November 30, 2022

by DRONELIFE Staff Writer Ian M. Crosby



Amazon Prime Air's New Delivery Drone Features Increased Range and Temperature Tolerance, Ability to Fly in Light Rain.

Working for almost a decade to make drone delivery a reality, Amazon has developed fully electric drones capable of delivering packages under 5 pounds to customers in under an hour, from click to delivery.

The company also previously announced that customers in Lockeford, California, and College Station, Texas, will be some of the first to receive Prime Air deliveries from the MK27-2 delivery drone later this year.

Now, Amazon has announced its MK30 next generation delivery aircraft. Expected to enter service in 2024, the MK30 will be lighter and smaller than the MK27-2. The new aircraft's extended range, higher temperature tolerance, improved safety features, and the ability to fly in light rain will allow customers to more frequently rely on drone delivery.

Amazon is also working to lower the noise signature of its drones. Prime Air's Flight Science team has developed new custom-designed propellers that will reduce the MK30's perceived noise by 25%. https://dronelife.com/2022/11/30/newest-model-of-amazon-delivery-drone-revealed/

Do US Consumers Want Drone Delivery? Auterion's 2022 Report Miriam McNabb November 30, 2022

The holiday retail rush is heating up. Covid-19, RSV, and the flu are still keeping some people at home: Forbes reported that online shopping on Cyber Monday was up more than 5% over last year.

But as the rail workers threaten a strike and delivery van drivers

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work overtime, delivery dates are getting pushed further and further out towards Christmas. Drone delivery is still in the trial program stage – but are US consumers ready for drone delivery to scale?

Auterion asked more than 1,000 US consumers if they were in favor of drone delivery. "…a solid majority of Americans (58%) favor the idea of drone deliveries and even more (64%) think drones are becoming an option for home delivery now or will be in the near future," finds the report. "With more than 80% reporting packages delivered to their homes on a regular basis, the survey finds that Americans are generally ready to integrate drone delivery into daily life." As traditional means of delivery get more expensive and less efficient due to current economics, including rising fuel prices and labor shortages, 47% of US consumers surveyed say they'd choose a retailer based upon the option for drone delivery.
https://dronelife.com/2022/11/30/do-us-consumers-want-drone-delivery-auterions-2022-report/

WHO IS THE BIGGEST DRONE INVESTOR? IT'S NOT BASED IN SILICON VALLEY

November 14, 2022 Sally French

The biggest drone investor is not one of the major Silicon Valley tech giants. In factor, the top venture capital investor in the drone industry isn't even located on the same continent as Silicon Valley.

And the top investor by deals made was Tokyo, Japan-based Drone Fund, which has made 22 investments since DII starting tracking companies 2010 (and really, since just 2017, as the five-year-old venture capital fund wasn't even around in 2010).

Y Combinator is most famous for investments in household names including Airbnb, Coinbase, Cruise, DoorDash, Dropbox, Instacart, Reddit, Stripe and Twitch. Andreessen Horowitz has invested in what are now tech giants including Airbnb, Box, Facebook, Instagram and Waymo. Though, the big players have equally big drone companies to their name. For example, Andreessen Horowitz is an investor in follow-me drone company Skydio.

DII put the entire ranking into a single infographic, which you can download here.

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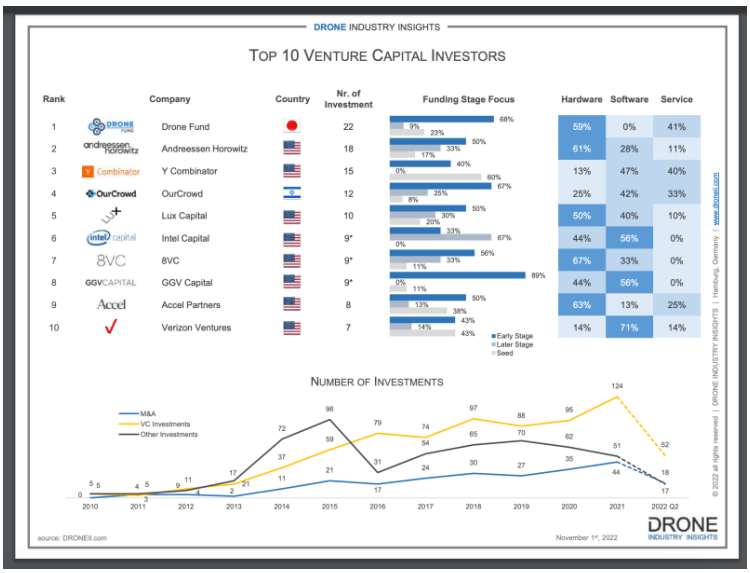

The infographic shows deals by year, which illustrates how venture capital investments have mostly increased ever since 2013, when Amazon founder Jeff Bezos appeared on 60 Minutes promising drone package delivery during a segment timed around the Black Friday shopping season. In fact, investment in drone companies has set fresh records every year since 2013, according to data tracked by German-based drone analytics and research group Drone Industry Insights. https://www.thedronegirl.com/2022/12/01/biggest-drone-investor-silicon-valley/

University of Pittsburgh Researchers Use Drones and Models to Study Bridge Reconstruction Scott Howe NOVEMBER 28, 2022

In January of this year, Pittsburgh's 50-year-old Fern Hollow Bridge collapsed. A bus and six cars fell when the bridge gave way, and 10 people were injured. Following the incident, work quickly began to rebuild the bridge. With funding from the federal Infrastructure Investment and Jobs Act, the $25.3 million emergency reconstruction effort is slated to finish in December.

As the bridge is being rebuilt, Alessandro Fascetti, an Assistant Professor at the University of Pittsburgh's Swanson School of Engineering, and his colleagues are engaging in a National Science Foundation-backed effort to chronicle the reconstruction. They use drones and lidar to capture data from the bridge, which is then used to create 3-d digital models. Using this information, the researchers hope to gain a deeper understanding of public infrastructure projects and develop best practices. https://www.commercialuavnews.com/construction/university-of-pittsburgh-researchers-use-drones-and-digital-models-to-study-bridge-reconstruction?mkt_tok=NzU2LUZXSi0wNjEAAAGIbgmBSQkCay9v30GriB-owwgbyQHDkNFLLbxx2V_8i5YJOLVTGm_BT9TLmsR9U3-ucr5GJZrr_iiTUqLQucD5qrE_pXvxmkUBIx56RXHiiB_kmQ

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GA-ASI Flies Autonomous Collaboration Using Avenger UAS November 30, 2022

General Atomics Aeronautical Systems paired a company-owned MQ-20 Avenger® Unmanned Aircraft System with a Sabreliner, operated by Lockheed Martin and acting as a surrogate fighter, and two F-5 Advanced Tigers from Tactical Air Support configured with internal TacIRST sensors, to perform multi-platform infrared sensing. During this event, all aircraft performed coordinated maneuvers to sense relevant airborne targets in the infrared spectrum. The MQ-20 and Sabreliner were digitally connected over a Tactical Targeting Network Technology mesh network to share sensing observations. In addition to the live-flight aircraft, five digital twins of the MQ-20 were integrated to autonomously fly a Live, Virtual, Constructive collaborative combat mission.

All live aircraft had operational next-generation Tactical Infrared Search and Track sensors during the test to provide Air-to-Air Moving Target Tracking. These live tracks were provided by Lockheed Martin's TacIRST sensor and was processed on a General Dynamics Mission Systems' EMC2 Multi-Function Processor, commonly referred to as "the Einstein Box." Using this software-defined architecture, the flight demonstrated crewed and uncrewed teaming between the MQ-20s, Sabreliner and manned F-5 AT tactical fighters.
https://uasweekly.com/2022/11/30/ga-asi-flies-autonomous-collaboration-using-avenger-uas/?utm_source=rss&utm_medium=rss&utm_campaign=ga-asi-flies-autonomous-collaboration-using-avenger-uas&utm_term=2022-12-01

Matternet Receives FAA Production Certificate for its M2 Drone Delivery System

November 30, 2022

Matternet, the developer of the world's leading drone delivery system, today announced that it has been granted a Production Certificate by the Federal Aviation Administration for its Matternet M2 drone. This follows the announcement earlier this year that the M2 aircraft achieved FAA standard Type Certification, a first of its kind for an unmanned aircraft.

The Production Certificate acknowledges that Matternet has established a quality management and manufacturing capability to produce aircraft that conform to the approved Type Design. This will enable Matternet to manufacture, test and issue airworthiness certificates for M2

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drones. The Matternet M2 drone will be produced at the company's Mountain View, California facility.

"Receiving an FAA Production Certificate is yet another milestone establishing Matternet as the first – and currently only – company able to produce certified delivery drone systems in the United States," said Andreas Raptopoulos, founder and CEO of Matternet. https://uasweekly.com/2022/11/30/matternet-receives-faa-production-certificate-for-its-m2-drone-delivery-system/?utm_source=rss&utm_medium=rss&utm_campaign=matternet-receives-faa-production-certificate-for-its-m2-drone-delivery-system&utm_term=2022-12-01

2Dec22

Israeli Police Deploy First BVLOS Drone as First Responder

Miriam McNabb December 01, 2022 by DRONELIFE Staff Writer Ian M. Crosby

This past October, an experiment saw the Israel Police deploy their first autonomous beyond visual line of sight (BVLOS) drone for command, surveillance and intelligence missions utilizing the FlightOps multi-drone operating system. A FlyTech drone was deployed as a first responder at the Modi'in-Maccabim-Reut station, where it carried out several missions throughout the city of roughly 93,000 residents.

Following the report of a traffic accident, the drone was immediately deployed to the scene where it arrived before the rescue teams to grant situational awareness to the police control room. In another incident, the drone was dispatched in response the report of a suspected terrorist, providing aerial infra-red video to the patrol unit to assist in the search. One of the drone's longest trips reached 6.5 miles.

The experiment was carried out by Ayalon Highways, the Civil Aviation Authority, the Innovation Authority, and the Smart Transportation Administration as part of the Israeli National Drone Initiative with the purpose of testing the operation of a drone as a first responder to police hotline calls. The drone was dispatched to the scene to provide real-time field awareness only minutes after receiving a call. https://dronelife.com/2022/12/01/israel-police-deploy-first-bvlos-drone-as-first-responder/

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