UAS and SmallSat Weekly News

Contents

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17Dec22

DroneUp begins Walmart drone delivery service in Texas Bruce Crumley - Dec. 16th 2022

Nearly six months after they initially announced plans to launch new drone deliveries to an additional 4 million potential US households, Walmart and DroneUp this week initiated aerial services to eight cities in Texas – just in time for the run-up to Christmas.

Walmart revealed its decision in May to expand existing drone delivery operations run by DroneUp to 34 communities in Arizona, Arkansas, Florida, Texas, Utah, and Virginia, allowing it to transport more than a million orders to customers' homes each year.

DroneUp will operate drone deliveries from 11 Walmart stores in the Texas cities of Garland, Murphy, Plano, Dallas, Richardson, Mesquite, Rowlett, and The Colony to households within a mile of participating outlets. Orders for some 10,000 eligible items of up to 10 pounds can be placed between 8 a.m. and 8 p.m. on www.droneupdelivery.com for a flat rate of $3.99, with goods lowered by winch into front or backyards or driveways in about 30 minutes.

As in other areas, Walmart's drone delivery service will be orchestrated by DroneUp's network of over 10,000 Federal Aviation Administration certified pilots.
https://dronedj.com/2022/12/16/droneup-begins-walmart-drone-delivery-service-in-texas/#more-89546

Southern Company, MSU's joint research on drones moves forward Ishveena Singh - Dec. 16th 2022

Utility provider Southern Company says it has reached a new milestone on a joint research project with Mississippi State University (MSU). The duo is finding ways for the energy provider to safely expand the use of drones to map critical infrastructure, assess weather-related damage, and conduct routine utility inspections.

At a recent proof-of-concept demonstration, members from the Southern Company's Aerial Services and Mississippi State University's Raspet Flight Research Lab flew a large drone with

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integrated sensors along 28 miles of transmission assets, capturing data from approximately 400 structures. A helicopter with a high-resolution camera was also flown with the intent of evaluating the sensor technology, so that it may be transferred to a drone in the future.

As the next step, the team would look to determine onboard sensor systems that can help drones to detect and avoid other aircraft in their surrounding airspace. Anthony Wilson, who serves as the president and CEO of Mississippi Power and also chairs the Mississippi State University Foundation, insists the research work is a "game-changer," and it will open up new avenues for beyond visual line of sight (BVLOS) drone operations.
https://dronedj.com/2022/12/16/southern-company-drone-research-msu/

UAV specialist Aerit's trial brings drone delivery closer in Sweden Bruce Crumley - Dec. 16th 2022

Sweden has taken a step closer toward regular drone delivery operations with UAV services company Aerit wrapping up a large-scale pilot project in partnership with Swedish supermarket chain ICA.

A major player in the development of drone services, including deliveries, Aerit completed the trial by transporting groceries ordered from ICA to homes in the large Norrtälje area north of Stockholm. The company was tapped to organize that dry run last year and had carefully prepared the operation of beyond visual line of sight (BVLOS) flights of its proprietary Nimbi UAVs across the 38 square-mile Norrtälje area – in temperatures that plunged to minus 10 degrees Celsius.

The six-day test run Aerit orchestrated delivered groceries to 10 out of the 30 households that volunteered to participate in the trial, and which then ordered groceries from the ICA Nära Gräddö Skärgårdshandel store using the chain's online app. Once they had, Nimbi UAVs transported goods to their destinations in much the same way DroneUp and Zipline craft do for Walmart clients in the US – albeit in extremely cold and snowy conditions the Nordic nation is (in)famous for.

The Norrtälje drone delivery trial was not the first Aerit has successfully completed. Last year its Nimbi craft flew a 2.7-kilometer BVLOS mission in Halland county, on Sweden's southwest coast transporting a grocery order. It marked the first commercial UAV delivery flight in the country

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and was, at that time, just the second BVLOS operation. https://dronedj.com/2022/12/16/uav-specialist-aerits-trial-brings-drone-delivery-closer-in-sweden/#more-89577

Orbital UAV and Animal Dynamics to Explore Advanced Propulsion System

December 15, 2022 News

Orbital Corporation Ltd. , a leader in the design and manufacture of integrated propulsion systems, and Animal Dynamics, an uncrewed aerial logistics company, have signed a Memorandum of Understanding. The agreement will explore initial concepts for heavy fuel engine systems applicable to Stork-STM, a heavy lift uncrewed aircraft system being developed by Animal Dynamics. It will result in a highly performant, reliable, and maintainable engine that will excel across a wide range of environmental conditions. Stork STM is an autonomous, heavy lift parafoil built from first engineering principles.

It is designed to carry heavy cargo weighing 135kg up to 400km (the distance between London and Amsterdam). Operational beyond visual line of sight and able to take off and land across short distances on unprepared ground, it is ideally suited for military resupply, humanitarian aid and emergency response missions. https://uasweekly.com/2022/12/15/orbital-uav-and-animal-dynamics-to-explore-advanced-propulsion-system/?utm_source=rss&utm_medium=rss&utm_campaign=orbital-uav-and-animal-dynamics-to-explore-advanced-propulsion-system&utm_term=2022-12-15

19Dec22

LAST-MINUTE CHRISTMAS 2022 DRONE DEALS December 15, 2022 Sally French

Christmas is this Sunday. Whether you've procrastinated on buying a gift for the drone pilot in your life, or you're just looking for a bargain on drone (and drone-related stuff), good news: there's a slew of last-minute Christmas 2022 drone deals on everything from DJI drones to FPV accessories and everything in between.

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Consider this the perfect pairing to my 2022 drone gift guide, which breaks down gift ideas for drone pilots at every price point. Since putting together that guide, I've been scouring the Internet to find bargains on stuff drone pilots would love ahead of Christmas 2022. Here are the best deals I've found:

The DJI Air 2S is considered my top pick for high-quality photography in my guide to the best drones for photographers. Even better is that it's now on sale for $190 off the usual $1,299 price. That's roughly 15% savings, bringing the price down to $1,109.

The drone stands out mostly for its 1" sensor offering 20-megapixel photos and 5.4K video. But it has other neat features, including a collision avoidance sensor on the front and back and gesture control. You can find the discount price at both Amazon and B&H Photo.
https://www.thedronegirl.com/2022/12/19/last-minute-christmas-2022-drone-deals/

Autonomous Inspection Drones: Nearthlab Brings Plug and Play Solution to Latin America

Miriam McNabb December 16, 2022 By Staff Writer Ian M. Crosby

Autonomous drone solutions provider Nearthlab has announced its completion of rounds of inspections in Latin America led by the award-winning NearthWIND Mobile, a plug-and-play solution converting store-bought products into smart device-tethered autonomous inspection drones. This marks the first instance in which standard commercial drones were deployed to complete full-scale inspections within the region.

The drones were deployed to inspect wind farms plagued by accessibility issues and operational hazards. Even in unfavorable conditions, NearthWIND Mobile proved its capabilities, conducting a survey of a 200-foot rotor blade in a span of five minutes.

In order to remain competitive with the rapid growth of renewable energy, it is necessary for wind farms to leverage the power of ultra-portable drone solutions to enable impromptu inspections. NearthWIND Mobile seeks to assist operators in carrying out unplanned checkups without financial and scheduling constraints of navigating the logistical complications surrounding the use of industrial-grade UAVs. https://dronelife.com/2022/12/16/converting-cos-drones-to-autonomous-inspection-drones-nearthlab-brings-plug-and-play-solution-to-latin-america/

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SpaceX launches 54 more Starlinks with a booster making its record-setting 15th flight WILLIAM HARWOOD DECEMBER 17, 2022

SpaceX launched its third Falcon 9 rocket in less than two days Saturday, sending 54 Starlink internet satellites into orbit using a recycled first-stage booster which was making its record 15th flight. It was also the California rocket builder's 59th launch so far this year, nearly doubling its 2021 record.

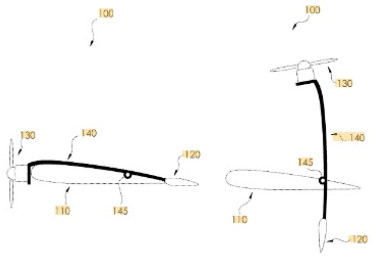
The launch followed a California flight Friday that put a $1.2 billion ocean-monitoring satellite into orbit, and a Falcon 9 flight from Florida Friday afternoon that sent two SES medium-altitude broadband satellites into space.

Two-and-a-half minutes after launch, the stage fell away and flew itself to touchdown on an off-shore landing barge. It was SpaceX's 124th drone ship landing, and its 158th successful recovery overall.

Booster B1058 sticks its 15th re-entry and landing, this one on an off-shore droneship, setting a new record for SpaceX.SPACEX

The Falcon 9 second stage, meanwhile, completed its climb to space within seconds of the booster landing. The 54 Starlink satellites were released in a batch, pushing the total number of Starlink satellites launched to date by SpaceX to 3,612, as SpaceX continues to populate its globe-spanning constellation of laser-linked broadband relay stations.
https://www.cbsnews.com/news/spacex-launches-54-starlink-satellites-booster-record-setting-15th-flight/

NASA Taps Advanced Aircraft Co. to Develop Tilt-Wing UAS INSIDE UNMANNED SYSTEMS DECEMBER 16, 2022



HAMPTON Va.—Advanced Aircraft Co., which develops and manufactures electric propulsion tilt-wing and multi-rotor uncrewed aircraft vehicles, announced NASA awarded it a contract to design and build tilt-wing prototype uncrewed aerial vehicles to agency specifications.

To exceed NASA's technical requirements for this project, AAC will develop a unique aero-activated tilt wing configuration that removes the weight and

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complexity of a mechanically actuated tilt wing aircraft for increased reliability and payload capacity. The aircraft fuselage and wing bodies will incorporate 3D printed materials and aluminum alloys for low weight, high strength and durability while also enabling rapid prototyping and limited scale manufacturing.

“Aero-activated tilt-wing configurations offer benefits over conventional configurations, but also introduce significant design challenges,” said Bill Fredericks, founder and CTO of AAC. “Careful design of the center of mass location of the wing body, aerodynamic center of the wing body, and attachment points to the fuselage are critical for establishing a stable equilibrium point to ensure safe and reliable operation.”
https://insideunmannedsystems.com/nasa-taps-advanced-aircraft-co-to-develop-tilt-wing-uas/

Do the 2022 Top Drone Industry Developments Indicate What We Might See in 2023? DAWN M.K. ZOLDI (COLONEL, USAF, RETIRED) DECEMBER 12, 2022

Looking back on 2022, the drone industry had a banner year. Some of the big developments include positive movement on the regulatory front, commercial-off-the-shelf drones prevailed on the battlefield and some of the first-ever drone certifications. Will we see more of this in the year to come? This article provides a look back at this year’s Top 5 developments and related insights into what they might mean for the industry looking ahead.

1: The Needle Moved on Beyond Visual Line of Sight (BVLOS)

2: Commercial Drones Changed the Face of Warfare

3: The Remote ID Rule Really Rolled Out

4: Counter-Drone Tech & Authorities Got Serious Attention

5: The FAA Type & Product Certified its First Drone

These ground-breaking approvals may have paved the way for all of **those waiting in the wings** for their type Certification approvals, including Airobotics, Flytrex, Percepto Robotics, Wingcopter GmBH, Amazon and Zipline, to name a few. 2023 may be the year where type and production certificates really start taking off.

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Zipline, Government of Rwanda Announce Partnership to Serve Entire Country

INSIDE UNMANNED SYSTEMS DECEMBER 15, 2022

A Zipline vehicle flies in Ghana.

KIGALI, RWANDA—Zipline today announced a new partnership with the government of Rwanda that aims to complete nearly 2 million instant deliveries and fly more than 200 million autonomous kilometers in the country by 2029.

Under the new partnership, Rwanda will triple its delivery volume by adding new delivery sites in rural and urban locations throughout the country and opening up Zipline's service to other government entities. In doing so, Rwanda will be the first country in the world with the ability to make autonomous instant deliveries to its entire population.

What started with blood deliveries six years ago now includes medicine, medical supplies, nutrition, and animal health products. This new partnership expands that foundation to support the country's financial, e-commerce and tourism industries. In fact, any agency within the government, including the Ministry of Agriculture and Animal Resources, the Ministry of Information Communication Technology, the Rwanda Development Board, the Rwanda Medical Supply, and the National Child Development Agency, can use Zipline's instant logistics and delivery system. https://insideunmannedsystems.com/zipline-government-of-rwanda-announce-partnership-to-serve-entire-country/

Autonomous Firefighting Drone Market Set for Growth INSIDE UNMANNED SYSTEMS DECEMBER 15, 202

The global autonomous firefighting drone market will reach a valuation of nearly $1.92 million in 2023 and is expected to progress at a CAGR of 16.7% to reach nearly $9 million by the end of 2033, so reports FactMR, a global market research firm headquartered in Dubai.

According to the firm, sales of autonomous firefighting drone accounted for a nearly 12% share of the global autonomous drone market at the end of

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2022. The analysis covers 30-plus countries, with the U.S. and Europe each representing a third of the 2023 market and China responsible for an additional 11%.

Drones can fill a major gap in firefighting. Estimates from the National Fire Protection Association state that 54% of high-rise apartment buildings, 45% of high-rise hotels and 41% percent of high-rise business buildings in the United States lack sprinkler systems, with 7% experiencing sprinkler system failures during fires. As populations grow and building densities rise, high-rise structures are particularly vulnerable.
https://insideunmannedsystems.com/autonomous-firefighting-drone-market-set-for-growth/

UK's MoD launches $157 million small drone program for troops Bruce Crumley - Dec. 19th 2022

In another indication of how the effectiveness of smaller UAVs in conflict situations like Ukraine's defense against invading Russian troops is leading modern armies to integrate the craft in ever larger numbers, the UK's Ministry of Defence (MoD) has ordered $156.6 million in portable drones for deployment by its armed forces.

The MoD made the announcement this month, naming Lockheed Martin UK the organizer of the multi-company effort to produce over 250 cutting-edge portable drones to replace aging aerial assets in the Mini Uncrewed Aerial System program. The vertically launched Stalker UAV has a wingspan of 4.88 meters and weighs 20 kgs. It packs imaging tech that can collect more than eight hours of data over a 60-mile range of nearly silent flight.

The foldable, backpackable Indago 4 weighs 2.27 kgs, and can be set up and deployed inside two minutes to take high resolution, super-zoom images capable of accurately identifying – day or night – people, objects, vehicles, and weapons filmed over eight-mile zones.

Lockheed Martin UK will act as the systems integrator for the MoD's new drone order. Over the 10-year duration of the contract, operational and technical capabilities of the craft are to be continually upgraded as onboard components improve. https://dronedj.com/2022/12/19/uks-mod-launches-157-million-small-drone-program-for-troops/

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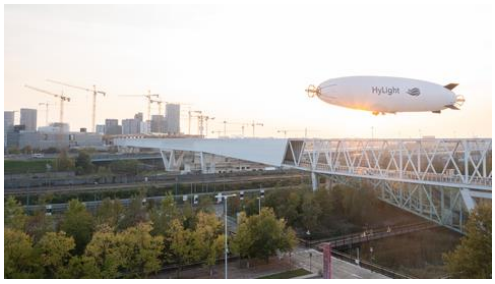
H3 Dynamics adds hydrogen-electric propulsion to HyLight unmanned airships built in France December 19, 2022 Jenny Beechener UAS traffic management news



Airship specialist HyLight and hydrogen-electric propulsion company H3 Dynamics have joined forces to bring new long range, sustainable and quiet unmanned airships to a range of commercial applications, according to a HyLight press release. Traditionally, airships use combustion engines for their propulsion power. With new hydrogen propulsion system developments at H3 Dynamics, HyLight's new breed of airships are designed to offer long-range zero emission flight and open a new category in air mobility. The two companies share a common goal, to decarbonize the aerial industry.

HyLight's unmanned airships move slowly but don't need to consume any power to stay aloft. They can operate for days at a time with heavier payloads compared to conventional drones, to conduct long range inspection of critical energy assets like power lines & pipelines or scan industrial infrastructure over long distances. Airships could also hover around specific areas to provide connectivity for large scale industrial sites or provide communications after a natural disaster. https://www.unmannedairspace.info/latest-news-and-information/h3-dynamics-adds-hydrogen-electric-propulsion-to-unmanned-airships-built-in-france-by-hylight/

20Dec22

Firefighting Helicopter Drone Takes First Flight at FAA's NY Test Site McNab on: December 19, 2022

Rotor Technologies, Inc.'s prototype of a firefighting helicopter drone successfully executed its first flight on December 2, 2022 at the FAA's New York UAS test site after receiving experimental certification on November 30, 2022.

Rotor Inc. isn't a hardware manufacturer. The team of MIT scientists have combined flight control algorithms, computer vision, and satellite communications to create CloudPilot, an operating system that can remotely pilot traditionally manufactured aircraft. From the NUAIR press release:

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Using CloudPilot, a pilot can "teleoperate" a helicopter from anywhere in the world. The system uses commercial Low Earth Orbit satellite constellations such as SpaceX's StarLink to transfer data over long distances with minimal delay. Proprietary VR technology gives pilots better visibility than the cockpit, enabling operations at night and in low visibility and preventing accidents caused by pilot disorientation and human error — such as the Kobe Bryant tragedy.

The prototype helicopter pictured is based on the Robinson R22, a light helicopter mostly used for flight training and agriculture. With a pilot, the R22 has a payload of approximately 170lbs. Without a pilot, Birdy McBird Face can carry a payload of 400lbs for more than 3 hours. This makes the CloudPilot systems ideal for fighting wildfires, where helicopters are commonly flown for delivering fire retardant, and Rotor is working with federal and state agencies on field testing in 2023 for firefighting. https://dronelife.com/2022/12/19/firefighting-helicopter-drone-takes-first-flight-at-faas-ny-test-site/

Walmart Drone Delivery Now Available from 11 New Stores in Texas Miriam McNabb December 19, 2022

Just in time for Christmas, the drone delivery service is now available from 11 new stores in the Dallas area.

Walmart has plans to expand the DroneUp drone delivery network to reach four million additional households across 6 states, including Texas.

"Drone delivery makes it possible for our customers to shop those last-minute or forgotten items with ease, in a package that's frankly really cool. Being on the forefront of that innovation at Walmart is something we're proud of," said Vik Gopalakrishnan, vice president, innovation & automation, Walmart U.S. "It may seem like a futuristic option, but it's giving our customers what they've always wanted, and that's time back to focus on what is most important to them."

More and more customers in the US commonly shop online or use a shopping app – and getting drone delivery is just as easy. Customers within a mile of a participating store can place orders through www.droneupdelivery.com from 8:00 a.m. – 8:00 p.m. local time. "Drones can deliver more than 10,000 eligible Walmart items up to ten pounds, including fragile items like eggs, in as little as 30 minutes," says the press release. https://dronelife.com/2022/12/19/walmart-drone-delivery-available-from-11-new-stores-in-texas/

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UK Awards $157mn Mini-drones Contract to Lockheed Martin: What Is TIQUILA?

16th December, 2022 Anmol Singla

UK's Ministry of Defence on Friday awarded the UK branch of arms manufacturer Lockheed Martin a 10-year contract to provide the British Army with 250 mini-drones worth 129 million pounds ($157 million). Drones will deliver high-resolution imaging capabilities to locate and identify potential targets, said the UK defence ministry in a statement. The mini drones will have features enabled by Artificial Intelligence including sophisticated targeting and threat recognition, said a news release by Lockheed Martin UK. “This program will bring a significant uncrewed technological advantage to the UK Armed Forces and be a key enabler in multi-domain integration, as well as create highly skilled jobs and increase the resilience of the industrial base,” said Paul Livingston, chief executive of Lockheed Martin UK.

“These remotely piloted systems will enhance the ability of our soldiers to gather crucial intelligence and capture essential imagery in a tactical environment as well as equipping the UK Armed Forces for operations now and into the future. This key program supports highly skilled jobs for the next decade,” said Andy Start, CEO of UK Defence Equipment and Support. “Lockheed Martin UK will be the conduit to a collection of additional UK and international companies known as the “TIQUILA Enterprise.” Start added.
https://www.republicworld.com/world-news/uk-news/uk-awards-157mn-mini-drones-contract-to-lockheed-martin-what-are-they-and-what-is-tiquila-articleshow.html

Leidos receives $334M Air Force hypersonics contract DECEMBER 19, 2022 COURTNEY MABEUS

Under the contract, Leidos will assist the U.S. Air Force Research Laboratory in developing the Expendable Hypersonic Multi-mission ISR (intelligence, surveillance and reconnaissance) and Strike Program, known as Mayhem. The system will use a scramjet engine to generate thrust to propel the vehicle at speeds greater than Mach 5. Leidos has received an initial $24 million task order to conduct reviews of systems requirements and conceptual design.

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Leidos has put together a team that includes Newport News-based Calspan Systems Corp., Massachusetts-based engineering nonprofit Draper, and San Diego-based technology company Kratos Defense & Security Solutions Inc., to serve as the system design agent. The group will develop partnerships with government, industry, and academia to deliver research and development needed to produce prototypes. Leidos will also lead engineering and programming to transition Mayhem from idea to operation.
https://www.virginiabusiness.com/article/leidos-receives-334m-air-force-hypersonics-contract/?oly_enc_id=9130E4751801F0T

AI-Powered Technology Enables Emissions Monitoring & Reduction Phoebe Grinter / 15 Dec 2022

Koch Engineered Solutions (KES) has formed a strategic collaboration with autonomous inspection and monitoring solution provider Percepto to assist its industrial customers in identifying key opportunities to control and reduce emissions with AI software delivered by Percepto's drone-in-a-box solution.

KES subsidiary Koch Specialty Plant Services, on-site vessel fabrication and process equipment installation and plant services provider, is offering Percepto's portfolio of Percepto Air Max and Percepto Air Max OGI drones to a range of industrial facilities. This offering will be packaged as a turnkey solution to customers as KSPS Aerial Inspection Solutions Powered by Percepto.

According to Percepto, its Air Max OGI is the only drone-in-a-box solution with an integrated optical gas imaging camera to enable operators to save time and resources by conducting remote high-frequency, high-quality visual and thermal inspections that can detect failures and visible leaks with AI-powered change detection.
https://www.unmannedsystemstechnology.com/2022/12/ai-powered-technology-enables-emissions-monitoring-reduction/?utm_source=UST+eBrief&utm_campaign=3fd04586e1-ust-ebrief_2022-dec-20&utm_medium=email&utm_term=0_6fc3c01e8d-3fd04586e1-119747501&mc_cid=3fd04586e1&mc_eid=0d642a9d48

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Radar Systems to Be Supplied to BVLOS Drone Program Mike Ball / 19 Dec 2022

Terma has entered into an agreement to supply multiple SCANTER 5202 radar systems in support of Thales, who is the systems integrator for Vantis, a Beyond Visual Line of Sight (BVLOS) system being implemented by the Northern Plains UAS Test Site and Thales in North Dakota.

Terma anticipates a substantial number of radar sites will be required to meet the needs of Vantis going forward on this highly visible and ground-breaking program. The 8-year frame agreement is for the supply and technical assistance to Thales as a radar sensor provider for BVLOS applications. This agreement covers the supply of several different Terma SCANTER radar configurations that best meet the detection requirements for each radar site. https://www.unmannedsystemstechnology.com/2022/12/radar-systems-to-be-supplied-to-bvlos-drone-program/

The top 5 drone manufacturers in the world Ishveena Singh - Dec. 20th 2022

Germany-based research firm Drone Industry Insights (Droneii) has released its annual flagship report, ranking the companies that manufacture drones. The research team assessed around 500 global companies whose core business is to build drones and concluded that the top drone manufacturers in the world are based in either China or the US. Here are the best drone companies of 2022, as per DII's report…

Best drone makers of 2022

1. DJI
2. Parrot
3. Skydio
4. XAG
5. JOUAV

DJI continues to be the world's leading manufacturer of civilian drones despite courting several controversies in the US this year. Based on Droneii's company ranking model, the Chinese drone maker enjoys an extremely comfortable gap of 78 points against the second-place French company Parrot.

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The race gets pretty tight once you take DJI out of the picture. There are only six points separating the second-place Parrot from the fifth place JOUAV. And Skydio barely manages to surpass XAG on the ranking despite having the same 18 points. Droneii explains that it tipped the scales in the favor of the company that showed slightly stronger development and public interest. https://dronedj.com/2022/12/20/top-drone-manufacturer-world-ranking/#more-89607

Archer's eVTOL air taxi receives FAA airworthiness criteria specs Bruce Crumley - Dec. 20th 2022

The Federal Aviation Administration (FAA) has issued a set of airworthiness criteria for the electric vertical takeoff and landing (eVTOL) air taxis under development by Archer Aviation, making the company just the second after Joby to receive the vital guide toward certification.

The FAA released the criteria for Archer's eVTOL on Monday in a post on the Federal Register, allowing public consultation and comments on the specifications for the company's proposed air taxi. The FAA issued a similar document pertaining to rival Joby's aircraft in November, providing more detail on certification requirements in what is otherwise a still shifting process.

Since earning the FAA's Special Airworthiness Certificate permitting it to begin testing of its Maker prototype just a year ago, Archer has progressed quickly through the various trial stages, completing its first full transition flight last month.

Joby – which like Archer expects to receive FAA certification of its eVTOL in 2024, then launch air taxi service the following year – is at a similar point in development, while Wisk has been making up ground since getting its all-clear to begin testing earlier this year.
https://dronedj.com/2022/12/20/archers-evtol-air-taxi-receives-faa-airworthiness-criteria-specs/#more-89610

22Dec22

Another Step Forward for AIR ONE eVTOL: You Can Pre-Order Your Personal Aircraft Now Miriam McNabb December 21, 2022 by DRONELIFE Staff Writer Ian M. Crosby

EVTOL (electric vertical takeoff and landing) aircraft developer AIR announced the completion of its AIR ONE vehicle's first full forward flight, in which the aircraft executed a seamless

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transition from hover to cruise. On December 18th at around 3:00PM Israel time, the AIR ONE prototype, equipped to its maximum capacity of 1100kg, transitioned from take off to its cruising speed. Following this accomplishment, thousands of flight hours are planned for the AIR ONE as part of its FAA certification process.

AIR is developing eVTOL for personal use, providing an everyday airborne alternative for short distance commuting. Able to take off and land on any flat surface with a 250kg payload, the all-electric two-seater aircraft grants a practical long range on a single charge, reaching speeds of up to 155 mph. AIR ONE fits most garages and driveways and is suitable for trailer hauls.
https://dronelife.com/2022/12/21/another-step-forward-for-air-one-evtol-and-you-can-pre-order-your-personal-aircraft-now/

Swoop Aero's drones hit a million items delivered as the company raises for expansion

Devin Coldewey@techcrunch December 13, 2022

Out where delivery trucks and full-size cargo planes don't make a lot of sense, drones are proliferating — they may never deliver your burrito, but could soon be indispensable for transporting medicine and emergency supplies. Australian drone logistics company Swoop Aero is celebrating new milestones and funding as it plans its expansion to more markets.

Swoop has been providing transport and delivery of medical materials — medications as well as things like samples for labs — in south Malawi, DR Congo and other locations for the last three years, and recently delivered its millionth item and completed its 20,000th flight.

This success has led to USAID awarding $1.5 million to Swoop, which will fuel in part the company's expansion. That's on top of a just-announced $10 million addition — from latecomer Levitate Capital — to its $16 million Series B from earlier this year.
https://techcrunch.com/2022/12/13/swoop-aeros-drones-hit-a-million-items-delivered-as-the-company-raises-for-expansion/?guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAKMdah4XLO51lbwXmltGkWGb_3LEU4GAukaSIW2HB8yXVFvtFHS3I4gFhnR1thacBRSwGmTmUlhN4pFSDOuDdMh7IcJPClLA8pjkN7kaw8ret_4ReQR23AGb6ks-HhGVgnMIn1v1m_OwVudNDAzUqic5p79y0KUQ_r_mooxX6K2M&mkt_tok=NzU2LUZXSi0wNjEAAAGI2i-WZaPU3OxgnFH2pFwz8nJwNzXelmauC8w8CzjekxS3buEjCWKHfhMbuXhnUkr47iJ1V5akOPGM4a4HAyMm6dHC_idj4YFjxQYnowl1o187-A&guccounter=2

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US-Canada Consortium to Create First International Advanced Air Mobility Corridor DECEMBER 19, 2022 Scott Howe

In late November, a consortium of American and Canadian companies and organizations announced the signing of a memorandum of understanding to create an electric Advanced Air Mobility corridor between the province of Québec and Syracuse Hancock International Airport in New York. The corridor—the first of its kind to operate internationally—will provide a platform for transporting commercial cargo and people using electric vertical take-off and landing (eVTOL) aircraft.

Members of the consortium include VPorts, NUAIR, Syracuse Hancock International Airport, Aéro Montréal, Innovitech, the Unmanned Aerial System Centre of Excellence (Alma), and Helijet International.

According to NUAIR CEO Ken Stewart, the project builds on multiple efforts in the US and Canada to integrate AAM into the airspace.
https://www.commercialuavnews.com/international/us-canada-consortium-to-create-first-international-advanced-air-mobility-corridor?mkt_tok=NzU2LUZXSi0wNjEAAAGI2i-WZZkdXdvZ5zCi6u7C3UKswlT731ZooKS7RZhsJCh2Z9k-vapDsreQ_UY71isujJYSwc7IYFrLid90YOJTwyASZxNHtkq48mUdTNQm-9bUMg

Frontier Precision Trains Hawaii's Largest Private Landowner on Drone-Based Imaging Contributed Guest Article DECEMBER 20, 2022

With nearly 400,000 acres under management, Kamehameha Schools is Hawaii's largest private landowner. Their property is home to educational facilities, as well as ranching and cropping systems and significant archaeological sites.

To gain a better understanding of their vast land and valuable assets, Kamehameha Schools wanted to use drone-based imaging technologies. For training, they turned to Frontier Precision.

According to Sean Muldoon, UAV Operator - Sales & Services Specialist at Frontier Precision, members of the school system's Archaeological and GIS team contacted Frontier Precision a

little more than two years ago for information on drone-based imaging. With more than 34 years of experience in fields such as GIS, uncrewed vehicle systems, surveying, mapping, and natural resource management, Frontier Precision was an ideal partner for the Kamehameha Schools' project.

"Our UAS team spent about a year educating them about drone technology and what systems they could use to assess and document what they had in the field," he said. "Because they encompass land management, cropping, ranching systems, and archaeological assets, we taught them about what's being done from a survey standpoint and what's being done in agriculture."

The process led to the creation of a concrete and scalable plan for acquiring data with drones and for managing that data. https://www.commercialuavnews.com/forestry/frontier-precision-trains-hawaii-s-largest-private-landowner-on-drone-based-imaging?mkt_tok=NzU2LUZXSi0wNjEAAAGI2i-WZTQiRIfU28705yISkoxbbqpI14L6KAtDvRmHPlmFxsn0yFrGOdDKW7V2lrvT7926efRteR8t9mnmY604S4AYkF-CUIBbODMklA0UC_NkQg

Sandy 10 years later: New technology deployed to protect New Jersey during storms October 25, 2022 News 12 Staff

With the 10-year anniversary of Superstorm Sandy approaching, New Jersey has embraced new technology that has allowed the most essential resources to stay up and running when severe weather hits. Hurricane Ida left parts of the state underwater in September 2021 and caused up to $10 billion in damage. Floodwaters threatened the American Water infrastructure during the storm. Drones were deployed to survey the scene.

"With drones, we were able to put them up in the air, look at things like our flood walls, our pumps that were flooded out. We were able to tell what assets are within the video stream and being able to inform our operators the information they needed to know without them having to go into harm's way or go into boats or things like that to be able to get eyes on it," says Chris Kahn, of American Water.

But flying a drone during a disaster requires cutting through the regulatory red tape, which was the purpose of a seminar held at the National Aerospace Research and Technology Park next to the Atlantic City Airport in Egg Harbor Township. https://newjersey.news12.com/sandy-10-years-

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later-new-technology-deployed-to-protect-essential-resources-during-storms?utm_medium=email&_hsmi=239063335&_hsenc=p2ANqtz-8VY_XgoM8300jGr1mcCdnwdVbXzeO1SYRNFnjqtDkzvwHKCgvASr4a2IS5gQ6hK009hZQp1wrT_vrSIomvYQbYs8qHQg&utm_content=239063335&utm_source=hs_email

DronePort Network joins Tulsa's drone and AAM development plan Bruce Crumley - Dec. 22nd 2022

Aerial strategy and infrastructure specialist DronePort Network has formed a partnership with Osage LLC to develop and manage the large, multi-purpose Skyway 36 aviation facility, whose use by fixed-wing planes, drones, and next-generation passenger craft will be the cornerstone of the Tulsa Regional Advanced Mobility project (TRAM).

Backed by $38.2 million from the US Economic Development Administration's Build Back Better American Rescue Plan, TRAM seeks to provide organizations from government, nonprofit, academia, and private sectors with a large test bed for trials of a wide array of new aerial activities, including advanced air mobility services. DronePort Network says TRAM is expected to generate up to 40,000 jobs in the Tulsa areas, and between $3.5 billion and 5 billion in economic activity during its first years of operation.

Skyway 36 will serve as one of four planned TRAM operating nodes, connecting Oklahoma State University (OSU), Osage, and Tulsa facilities using a 114-nautical mile flight corridor for drones and advance air mobility craft.

Located just four miles from Tulsa, Skyway 36 features newly renovated hangar and office spaces, a 3,000-foot runway suitable for both small fixed-wing aircraft and as vertiports for drones and larger electric vertical takeoff and landing (eVTOL) craft. https://dronedj.com/2022/12/22/droneport-network-joins-tulsas-drone-and-aam-development-plan/#more-89675

Star War's Mark Hamill voices warnings in Ukraine's Air Alert app Bruce Crumley - Dec. 22nd 2022

Original Luke Skywalker actor Mark Hamill has extended his support for Ukraine beyond raising money for the nation's Army of Drones campaign to now lending a hand (or more like a throat) to helping Ukrainians keep safe from aerial strikes through their use of an app called Air Alert.

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Star Wars hero Hamill initially began aiding Ukraine's defense against Russia's invasion by joining efforts to raise funds to buy and ship drones from Western Europe to for use by local forces. The actor's enduring support for Kyiv's resistance to Moscow's unprovoked invasion led President Volodymyr Zelenskyy to appoint the American last September as ambassador of Ukraine's Army of Drones campaign – one of the defense, humanitarian, and reconstruction projects for which the nation's UNITED24 organization is generating donor financing.

Now Hamill is throwing his voice behind Ukraine's efforts to protect its people from Russian missile, rocket, and drone attacks by providing vocal messages to the English version of the Air Alert app that informs people on aerial strike situations in real time.

Created by Ukrainian company Ajax System after the invasion had begun as a supplemental, hand-held early warning supplement to air raid sirens, the Air Alert app sends attack warning information to users in all 24 regions of Ukraine and Kyiv.
https://dronedj.com/2022/12/22/star-wars-mark-hamill-voices-warnings-in-ukraines-air-alert-app/#more-89685

23Dec22

The Winners of the 3rd International Drone Show Competition! Check Out These Videos

Miriam McNabb December 22, 2022

SPH Engineering, a major provider of drone show software, sponsored an international drone show competition that drew entries from 31 countries.

The winners came from all over the world, showcasing the technology and their creativity.

- 2 winners in the "Best drone show animation" nomination: **Drone Show Animations** team from Portugal & **Diffuse x Titouan Malivoir** from France,
- "Best drone show storytelling" nomination winner: **Celestial** from the United Kingdom,
- 2 winners in the "Best drone show at the event" nomination: **Kaohsiung City Government Bureau of Cultural Affairs** from Taiwan & **Andrei Golenev** from the United Arab Emirates,

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- "Best promotional drone show" nomination winner: **Lumasky** from the United Arab Emirates,
- "Best integrated show: Fireworks and Drones" nomination winner: **Sky Elements**from the United States of America.

"Drone show choreographers, show producers, and leaders of drone show teams push the boundaries of the possible every time! Every finalist is strong. Next year we will further expand the concept in accordance with the wishes and requests of the community," said Alex Levandovskiy, head of the Drone Show Software division at SPH Engineering.

Beyond the entertainment value, drone show software showcases drone swarm capabilities and the potential for m:n (one operator, many drones) operations. Check out these amazing videos of some of the winning shows, and the announcement video with clips: https://dronelife.com/2022/12/22/the-winners-of-the-3rd-international-drone-show-competition-check-out-these-videos/

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