UAS and SmallSat Weekly News

Contents

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23Oct21

SwissDrones Flies in Malta: BVLOS Flights Over Water Miriam McNabb October 21, 2021

by DRONELIFE Staff Writer Ian M. Crosby

This week, Transport Malta Civil Aviation Directorate, Malta's Civil Aviation Authority, and SwissDrones, a global manufacturer of long-range unmanned helicopter systems, oversaw a sequence of long-range Beyond Visual Line of Sight (BVLOS) flights over water for diligent maritime patrol, search and rescue, and surveillance mission simulations. Further flights were directed to test and verify communication and sensor payloads.

The operations were able to take place due to the cooperation of Transport Malta, Malta Communication Authority, Malta Air Traffic Services, Enterprise Malta, Indis Malta, and the San Lawrenz local council. The flights were carried out in accordance with European Union Safety Administration (EASA) regulations for unmanned aircraft under the Specific Category, with full authorization from Transport Malta.

The SDO 50 V2 Vertical Take-Off and Landing unmanned helicopter system was deployed by SwissDrones. The model is designed for a multitude of long-range missions in adverse weather conditions, day and night, at high altitude, and a large spectrum of temperatures.

Unique design features allow a payload capacity of up to 45 kg, long endurance at over 3 hours, stable flight patterns, the ability to carry single or multiple high-quality sensors, and a multitude of safety features. Autonomous take-off and landing procedures and autonomous flight patterns are both enabled by an integrated autopilot system.

The SDO 50 V2 utilizes the Flettner system of coupled dual rotors revolving in opposite directions. Each rotor mast is positioned at a slight angle to the other, allowing the blades to intermesh without making contact. This design feature not only allows for the aircraft's payload capacity, increased endurance, and stable flight patterns but also enables the helicopter to function without a tail rotor, saving power and allowing for a substantially higher payload to weight ratio. https://dronelife.com/2021/10/21/swissdrones-flies-in-malta-bvlos-flights-over-water/

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Turkish Navy receives the first domestically produced Aksungur UAV 21st October 2021 The Shephard News Team

ANKA-AKSUNGUR is powered by two PD-170 twin-turbocharged diesel engines enabling long endurance operations up to 40,000ft.

The Turkish Navy received the Aksungur, on 20 October. It reached 1,000 flight hours in August. It can fly for 50h, carry up to 750kg of payload and is capable of long-endurance operations at an altitude of up to 40,000ft.

Aksungur can perform uninterrupted multi-role intelligence, surveillance, reconnaissance, and attack missions with its high payload capacity and provide BLoS operational flexibility with its SATCOM payload.

TAI funded the development of the UAV alone with the expectation to receive orders from the Turkish Armed Forces as the military were involved in the Aksungur's development.

The contract was received **following the first flight**, and the platform entered into mass production in December 2020. Four Aksungurs will be delivered to the Turkish Armed Forces by the end of 2021, with this delivery marking the first in the series.
https://www.shephardmedia.com/news/air-warfare/turkish-navy-receives-the-first-domestically-produ/?utm_source=Newsletter&utm_medium=email&utm_content=Today+s+Daily+Defence+News+Alert&utm_campaign=Daily+News+Alert+-+18+Oct+2021+%28no+sponsor%29

Korean Air and Boeing Insitu Collaborate to Develop Vertical Takeoff and Landing Drones October 22, 2021

△Korean Air Aerospace Division Head Park Jung-woo (left) and Boeing's Overseas Sales Asia Pacific Director Randy Lott collaborated with Boeing Insitu for technology at ADEX 2021 held at Seoul Airport in Seongnam-si, Gyeonggi-do on the 21st. A memorandum of understanding was signed, and a commemorative photo was taken.

Insitu, established in 1994, is a subsidiary of Boeing that specializes in unmanned aerial vehicles, and has developed the 'Scan Eagle', an unmanned aerial vehicle operated by the U.S. Department of Defense.

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Korean Air and Boeing Insitu have agreed to cooperate to develop a lighter and more modular tactical vertical take-off and landing drone by combining the core technologies of the two companies. Korean Air has a variety of unmanned aerial vehicle platforms such as division-level UAVs deployed to division-scale troops to perform reconnaissance missions, 5-ton high-performance strategic UAVs, tilt-rotor UAVs, next-generation low-visibility UAVs with stealth functions, multi-purpose UAVs, and hybrid drones. https://www.archyde.com/korean-air-and-boeing-insitu-collaborate-to-develop-advanced-vertical-takeoff-and-landing-unmanned-aerial-vehicles/

Who Are the World's Biggest Climate Polluters? Satellites Sweep for Culprits

Timothy Puko Oct. 19, 2021

A digital rendering of MethaneSAT, an $88 million satellite project that the U.S.-based Environmental Defense Fund is building with support from the government of New Zealand and others.

The MethaneSAT satellite under development uses spectrometer lenses to detect light refractions of methane, a potent greenhouse gas.

Over the past three years, satellite images have been used to spotlight previously unreported leaks of methane—or to bump up estimates of known emissions—in Russia, Turkmenistan, Texas' Permian Basin and elsewhere, in some cases triggering international scuffles. Several countries have expressed discomfort with satellite imagery potentially becoming fodder for a rival to "name and shame" them for emissions.

A key focus for climate-monitoring satellites is methane, a potent greenhouse gas that leaks erratically from wellheads, pipelines and storage tanks, making it tougher to detect—especially in remote locations and authoritarian countries that don't allow field inspections or aircraft overflights.

At the international climate summit in Glasgow next month, the U.S. and others—including the United Nations, private companies and the European Space Agency—will be among those advocating wider use of satellites for measuring progress toward cutting greenhouse gas emissions. U.S. climate envoy John Kerry signed a joint statement in July saying the U.S. would work with Russia to track emissions by satellite. https://www.wsj.com/articles/who-are-the-worlds-biggest-climate-polluters-satellites-sweep-for-culprits-11634635980?&mod=djemfoe

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$25 Million Funding Raised for First Responder Drones 19 Oct 2021 Mike Ball

BRINC, an American technology company building a new class of drones in response to the mass shooting at The Mandalay Bay, today announced that it has raised $25 million in Series A funding for its mission to keep people safe in dangerous situations. The financing was led by Index Ventures with participation from Sam Altman, Tusk Venture Partners, Jeff Weiner's Next Play Ventures, Dylan Field, Elad Gil, Patrick Spence, Alex Wang, and former Acting Secretary of Defense, Patrick Shanahan. BRINC previously raised a seed round of $2.25M led by Sam Altman, CEO of OpenAI.

The global drone market has been driven by investment and growth of drones that fly outside and overhead using GPS technology, across a range of categories from personal/hobbyist, to delivery, surveillance, and defense. In contrast, BRINC, founded by Blake Resnick, fills a specific market gap and customer need for drones that fly inside of structures and serve first responders, a market estimated to be over $1B globally. BRINC creates a new class of reliable systems that fly safely indoors using Lidar technology, where GPS does not work, and provides live, two-way communication to give responders the eyes and ears they need to mitigate risk, protect, and save lives. American-made, BRINC began selling its first system – the LEMUR – early this year and has already delivered hundreds of systems. Recently, BRINC aided responders in Surfside, Florida, with search and rescue inside of the Champlain South building collapse. https://www.unmannedsystemstechnology.com/2021/10/25-million-funding-raised-for-first-responder-drones/

Pyromaniac UAV? Australia tests backfire-lighting drones to battle wildfires

Bruce Crumley - Oct. 22nd 2021

Against the growing number and increased destruction of wildfires across the planet over the last several years, it's become more frequent to hear reports of UAV assisting firefighters in the battle to put them out. Now the Australian state of Victoria is using drones to light fires as well.

This week Victoria officials revealed tests had been carried out using drones to light controlled fires in the inland Wimmera region which features flat drylands and large agricultural spreads.

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The trials flew UAV equipped with incendiary devices to ignite blazes in designated places across a 7,413-acre zone. Those were allowed to burn as simulated backfires – relatively small fires often lit in front of advancing infernos to deprive them of fuel once they arrive.

Forest Fire Management Victoria, which oversaw the tests, said UAVs were able to fly above often difficult or inhospitable terrain to remote spots where counter-blazes were lit faster than humans could. That aerial approach in live situations would also save people the hard haul out, as well as what can be a dangerous race to do their work and get back before raging wildfires get too close. Meantime, drones proved very effective setting backfires in precisely designated places.

Earlier this week, the state of New South Wales said it would be outfitting its firefighters with $42.5 million worth of tech equipment to fight wildfires, including fleets of drones, so-called COW UAVs, and other vehicles providing mobile WiFi.

On Wednesday, the Minderoo Foundation – an Australian philanthropy with $1.75 billion in funds it provides to a variety of causes – said it would begin using satellites and predicative analytics tech to build a new anti-wildfire monitoring system. The foundation says it hopes to develop that platform by 2025 to be able to deploy firefights to the most effective places to extinguish them within their first hour of burning. https://dronedj.com/2021/10/22/pyromaniac-uav-australia-tests-backfire-lighting-drones-to-battle-wildfires/#more-69880

24Oct21

Volocopter Joins Osaka Roundtable to Bring UAM to Japan HEADLINE

NEWS GEORGINA FORD OCTOBER 24, 2021

On 1 October 2021, Volocopter partook in the Osaka Roundtable. With nine million residents, Osaka Prefecture has one of Asia's largest industrial bay areas, including several international seaports and airports within its vicinity, which makes it an ideal location to test over land, water, and city conditions. As host of the Expo 2025 Osaka Kansai, Osaka has strong ambitions to kickstart UAM businesses from this event onward as a leader in an already advanced nation.

Since 2018, Japan has been proactively shaping its future of air mobility and set an ambitious target to achieve full commercialization of eVTOL air taxi and heavy lift cargo drone business by

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2030. Japan is one of few countries globally that boasts a comprehensive roadmap for UAM businesses to achieve these goals on a national level.

Furthermore, Volocopter is strategically joining forces with local partners and regulators early in the commercialization process to strengthen its position within the market. Recently, JAL reserved 100 Volocopter aircraft (**VoloDrone** and **VoloCity**) units for its future use. Additionally, Volocopter has started direct communications with local government offices to discuss how Volocopter products can support the local ecosystem in disaster relief. https://www.commercialdroneprofessional.com/volocopter-joins-osaka-roundtable-to-bring-uam-to-japan/

Airbus Zephyr Solar High Altitude Platform System reaches new heights HEADLINE NEWS INNOVATION GEORGINA FORD OCTOBER 21, 2021

The Airbus Zephyr S completed a successful 2021 test flight campaign in the United States. The final Airbus solar-powered High Altitude Platform System flight touched down on 13th September in Arizona, ending the most ambitious and successful Zephyr flight campaign.

The flight campaign had a clear customer focus – to demonstrate how Zephyr could be used for future operations, flying outside of restricted airspace and over airspace shared with commercial air traffic. Carrying an Optical Advanced Earth Observation system for Zephyr payload, Zephyr proved its operational value to provide instant, persistent, and improved situational awareness.

The campaign consisted of six flights, four low-level test flights and two stratospheric flights. The stratospheric flights flew for around 18 days each, totaling more than 36 days of stratospheric flight. This adds a further 887 flight hours to the 2,435 stratospheric flight hours for Zephyr to date, marks significant progress for fixed-wing HAPS and is a step towards making the stratosphere an operational reality . https://www.commercialdroneprofessional.com/airbus-zephyr-solar-high-altitude-platform-system-haps-reaches-new-heights-in-its-successful-2021-summer-test-flights/

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25Oct21

Qatar Voices Frustration Over U.S. Response to Request to Buy Drones Gordon Lubold Oct. 24, 2021

WASHINGTON—The Qatari government, which has aided in the evacuation of tens of thousands of Afghans and backed American counterterrorism operations in the Middle East, is voicing frustration with the Biden administration for slow-walking a request to buy advanced drones from the U.S.

The government of Qatar made a formal request more than a year ago to buy four armed MQ-9B Predator drones. Qatari officials said they would use the U.S.-supplied drones to conduct surveillance on vast natural-gas facilities to prevent terrorist activity and in other areas to keep an eye on threats posed by terrorists in the region. Doha also is hosting soccer's World Cup next year, which Qatari officials believe requires extra vigilance against terrorist activity.

The armed drones, an estimated $600 million deal, would give the Qataris a more robust defensive capability in the region. That could help the U.S. prevent threats posed by Iran, U.S. officials and defense experts said. Qatar also seeks to buy American F-35 stealth fighters, in a separate request.

The State Department has approved similar requests from other allies, including the United Arab Emirates. That has added to frustration on the part of the Qataris, who argue that Doha has helped the U.S. in numerous ways, particularly with the extraction of Afghans at risk following the collapse of the Kabul government in August.
https://www.wsj.com/articles/qatar-voices-frustration-over-u-s-response-to-request-to-buy-drones-11635052841

KARI Optionally Piloted Personal Air Vehicle Daejeon, South Korea www.kari.re.kr

The Korea Aerospace Research Institute (KARI) established in 1989, is a government-funded research institute for the aerospace field in South Korea. Its main office and laboratories are in Daejeon, and the flight test center is located in Goheung.

The eVTOL technology demonstrator program was launched in 2019 and funded by the Ministry of Land, Infrastructure and Transport and the Ministry of

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Trade, Industry and Energy. KARI leads the research and development program to develop a one-seat class electric VTOL (eVTOL) demonstrator. The Optionally Piloted Personal (or Passenger) Air Vehicle (OPPAV) is based on KARI's previous VTOL UAV development experience. Wind tunnel testing of a scaled powered model was successfully completed in July 2020, in the KARI Low Speed Wind Tunnel.

The first flight of the KARI OPPAV 44% sub-scale technology demonstrator 44% eVTOL was successfully completed in early November 2020 at Goheung Flight Test Center for many types of flight and validation tests. Here is a flight test video in full tilt of front props and rear-props-stop. Flight tests of a sub-scale technology demonstrator will be started by 2021. The first flight of a full-scale technology demonstrator is scheduled for mid-2022. https://evtol.news/kari-pav/

ANRA in Japan: Demonstrating Airspace Management and Drone Delivery Platforms

Miriam McNabb October 24, 2021 by DRONELIFE Staff Writer Ian M. Crosby

Today, ANRA Technologies, a leader in integrated airspace, mission management and delivery systems for uncrewed aircraft, announced that it will be participating in live drone flights over Japan as part of a project led by the National Institute of New Energy and Industrial Technology Development Organization (NEDO). ANRA will be demonstrating its airspace management and drone delivery software platforms which aims to develop a drone traffic management system for multiple drone operators to fly in the same airspace safely.

As a major player in the NEDO Drones and Robots for Ecologically Sustainable Regional Demonstration project, ANRA Technologies, alongside other partners such as BIRD INITIATIVE, NEC Corporation, and All Nippon Airways, are exhibiting drone operations and relevant use cases in Wakkanai City in Japan with the use of ANRA SmartSkies™ airspace and delivery management software platforms. Over the course of the last several years, NEDO has been researching and developing integrated traffic management to design the framework for a nationwide traffic management system. The goal of the project is to establish an assortment of functions and systems to guarantee the safe integration of uncrewed aircraft into the National Airspace System safely. The project will hold demonstrations featuring drone-based logistics,

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infrastructure inspection and disaster response use cases. https://dronelife.com/2021/10/24/anra-in-japan-demonstrating-airspace-management-and-drone-delivery-platforms/

Dance music fans can't stop gushing over this Las Vegas drone show Ishveena Singh - Oct. 25th 2021 DRONE LIGHT SHOW

The Electric Daisy Carnival (EDC) is one of the biggest dance music festivals in the world. Last weekend, it attracted more than 500,000 fans to Las Vegas over a three-day period. The logistics were a bit of a nightmare, but the one thing that everyone agreed was amazing was a drone light show during the opening ceremonies.

EDC is celebrating its 25th anniversary this year. So, to commemorate the milestone, event production company Insomniac decided to go all-in with lights, lasers, fireworks, and the pièce de resistance: drones.

Flying in harmony, 600 LED-equipped drones took over the Las Vegas sky last weekend. These drones created multiple formations, including the iconic owl logo of the EDC, a silhouette of the unmistakable cathedral stage, and EDC's 25-year logo.

The festival shared a time lapse of the drone show from the first night on social media and it gave those not attending: https://dronedj.com/2021/10/25/dance-music-vegas-drone-show/#more-69979

Mesa Air Group to Launch Drone Delivery Business in Partnership with Flirtey

October 24, 2021 News

Mesa Air Grouphas signed an agreement with aerospace technology company Flirtey to order 4 delivery drones, with an option to order an additional 500 aircraft. The agreement marks Mesa becoming the first scheduled airline to launch drone delivery in the U.S.

Mesa and Flirtey are initially focusing on the last-mile food delivery industry, enabling Mesa to expand beyond the global airlines market and into the global food service market. The immediate goal of the partnership is to conduct commercial

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drone deliveries in the last-mile food and beverage market in the U.S. The parties plan to expand the drone delivery service in the U.S. and New Zealand.

Flirteyis supplying the Flirtey Eagle, an electric powered, drone that conducts delivery to homes and businesses, and Flirtey's software platform that conducts autonomous flight operations, for Mesa to operate commercial drone delivery.

The partnership will prioritize operational excellence and data collection, enabling rapid expansion with Mesa's operational experience as a leading regional air carrier with approximately 450 daily departures across the U.S. and Flirtey's technical experience having conducted over 6,000 drone delivery flights in the U.S. with its technology protected by over 1,000 patents claims issued and pending in the U.S. and worldwide. Flirtey recently expanded production of delivery drones to meet growing demand. Flirtey's aircraft are made in the USA. https://uasweekly.com/2021/10/24/mesa-air-group-becomes-first-scheduled-airline-to-launch-drone-delivery-business-in-the-u-s-in-partnership-with-flirtey/?utm_source=rss&utm_medium=rss&utm_campaign=mesa-air-group-becomes-first-scheduled-airline-to-launch-drone-delivery-business-in-the-u-s-in-partnership-with-flirtey&utm_term=2021-10-25

Suntuity AirWorks Announces Partnership with Eco Spec for Drone Building Inspections October 24, 2021 News

Suntuity AirWorks, the UAV division of the Suntuity Group of companies, recently announced their new partnership with building manufacturer's representative firm Eco Spec in a bid to enhance drone-based facade inspections in the commercial real estate sector. As part of their newly announced drone leasing program, which was recently leveraged by the South Florida Governmental Purchasing Cooperative, Suntuity AirWorks will enable Eco Spec customers to integrate drone technology into their existing construction and maintenance processes.

Drone-based building and facade inspections safely capture the same data as traditional inspection methods with scaffolding with significantly less time and risk. In one flight, a UAV can capture thousands of digital and infrared images in minutes that would typically take traditional inspectors multiple days to complete. With new advancements in LiDAR technology, drones can also perform high resolution 3D scans to detect defects within and around existing structures.

Charmie Pujalt, Director of New Business Development at Suntuity AirWorks, believes the new partnership will lay the groundwork for a mutually beneficial relationship between the UAV and

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commercial real estate industries. https://uasweekly.com/2021/10/24/suntuity-airworks-announces-partnership-with-eco-spec-for-drone-based-building-inspections/?utm_source=rss&utm_medium=rss&utm_campaign=suntuity-airworks-announces-partnership-with-eco-spec-for-drone-based-building-inspections&utm_term=2021-10-25

26Oct21

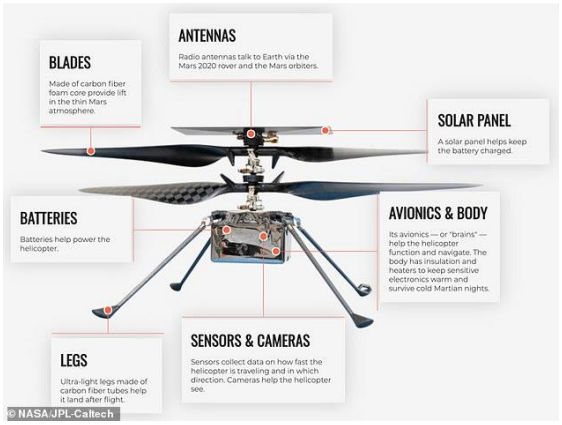
NASA's Ingenuity helicopter completes its 14th flight on Mars SAM TONKIN FOR MAILONLINE 26 October 2021

NASA's Ingenuity helicopter has successfully completed a 14th flight on Mars — its first since a two-week blackout caused by the Red Planet's position in space.

The US space agency was forced to pause most of its robotic Mars missions for safety reasons when the planet moved behind the sun from Earth's perspective earlier this month.

As weather at Jezero Crater gets warmer, the helicopter's rotors must turn faster to achieve flight, so engineers wanted to test its performance at higher rpm settings.

NASA's JPL team tweeted: 'The #MarsHelicopter successfully performed a short hop in its current airfield to test out higher rpm settings so it can fly in lower atmospheric densities on the Red Planet. 'This test also leaves the team room for an rpm increase if needed for future flights.'



The US space agency originally designed the helicopter to fly five times on Mars, but it has already completed 14 missions.

It is currently acting as a scout for the Perseverance rover, which is searching for ancient microbial life on the Red Planet. https://www.dailymail.co.uk/sciencetech/article-10131517/NASAs-Ingenuity-helicopter-completes-14th-flight-Mars.html

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Challenges and Opportunities for Government SATCOM-Enabled UAS Operators

26 Oct 2021 Mike Ball

International satellite communications (SATCOM) services provider *Intelsat* has released a whitepaper detailing some of the current challenges and future opportunities for operators of government-owned satellite-connected unmanned aerial systems around the world. Download your copy >

As the uses of UAS for government operations begin to expand beyond the standard military-defined framework of intelligence, surveillance, and reconnaissance (ISR), the need for secure, reliable and flexible high-throughput telecommunications has become increasingly apparent. Currently, there is no one-size-fits-all approach that covers all global regions.

The whitepaper covers:

- The importance of UAS for nations' military infrastructure
- The current state of the defense market for UAS
- Civil and mixed civil-military UAS applications
- Expanding the opportunities and benefits of SATCOM-enabled UAS
- Social and societal benefits of commercial satellite-based UAS, including disaster management, firefighting and medical transport
- Challenges faced by governments seeking to employ UAS
- The advantages of the Intelsat network for civil and defense agencies.

https://www.unmannedsystemstechnology.com/2021/10/challenges-and-opportunities-for-government-satcom-enabled-uas-operators/?utm_source=UST+eBrief&utm_campaign=07cfcfa037-ust-ebrief_2021-oct-26_engaged&utm_medium=email&utm_term=0_6fc3c01e8d-07cfcfa037-119747501&mc_cid=07cfcfa037&mc_eid=0d642a9d48

After Jetson, Air One enters personal eVTOL vehicle market Bruce Crumley - Oct. 26th 2021 EVTOL ADVANCED AIR MOBILITY

In the wake of last week's unveiling of a Swedish single-seat personal electric vertical takeoff and landing (eVTOL) vehicle, Israeli company Air One now introduces a two-seat rival to allow individual consumers to fly themselves around.

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Flying car startup Air has rolled out its dual-person eVTOL for pre-orders ahead of expected deliveries in 2024. Now in the demonstration prototype phase, the Air One is described as having a maximum 110-mile range – or one hour aloft – on a single charge, reaching top speeds of 255 mph. Rejuicing a flat battery to full capacity is said to take an hour, with a 20% to 80% jolt requiring 30 minutes. Though Air has not communicated price for its now on-order aircraft, press reports quote company officials saying they hope to keep it in the same range as high-end cars.

Introduction of Air One comes less than a week after Sweden's eVTOL vehicle maker Jetson presented its one-seat personal aircraft, not illogically dubbed ONE. That model is billed as reaching top speeds of 63 mph, with most other specs given applying only to dimensions. Like the Air One, the Jetson ONE can be partially broken down to adapt to limited parking or storage spaces.

Thought Jetson's eVTOL seems a bit farther down the road to manufacturing and delivery, it's like Air One in its trend-bucking target market. Most flying car producers are aiming for somewhat larger and longer-range vehicles for air taxi, delivery, or similar use. Jetson and Air are focusing on individual consumer operation and are well beyond the proof of concept stage most competitors are still in. https://dronedj.com/2021/10/26/after-jetson-air-one-enters-personal-evtol-vehicle-market/

Sweden's Everdrone pilots first cross-border AED drone delivery Bruce Crumley - Oct. 26th 2021 DRONE DELIVERY DRONES FOR GOOD FIRST RESPONDERS

As far as UAV flights go, this one supremely qualifies as beyond visual line of sight. Last month, Swedish specialized drone services company Everdrone successfully controlled the delivery of an automated external defibrillator (AED) from 800 kilometers away – and an entirely different country.

The 1.6 km drone delivery of an AED flew a five-minute route in Helsinki, Finland, but was controlled by Everdrone technicians in Gothenburg, Sweden. The mission was the first UAV delivery of an AED piloted from a different country and one of the few de facto cross-border drone operations in the European Union.

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Everdrone, which focuses on serving first responder and public safety clients, has made drone delivery of AEDs a priority. It already operates seven UAVs dedicated to that function in four Swedish cities, with a fifth city to be added soon. The craft fly those emergency missions several times each week.

The company's tests in Helsinki were an extension of that work in a country that can sorely use the help. Between 5,000 and 10,000 people die from out-of-hospital cardiac arrests in Finland every year. Research has shown the chance of survival of people suffering heart attacks in remote places decreases 10% each minute after the onset of arrest. Studies in Sweden have demonstrated using drones to deliver AEDs in those situations is generally faster – sometimes much faster– than traditional ground options. https://dronedj.com/2021/10/26/swedens-everdrone-pilots-first-cross-border-aed-drone-delivery/

The Drone Racing League and T-Mobile Bring Championship Race to the Las Vegas Strip October 26, 2021 Drone Racing

The Drone Racing League (DRL), the world's premier, professional drone racing property, today announced the DRL Vegas Championship Race Presented by T-Mobile, the finale of the 2021-22 DRL Algorand World Championship Season. The final race of the season will take place on a thrilling outdoor course along the Las Vegas strip at T-Mobile Arena on opening night of CES, Wednesday, January 5, 2022.

As the biggest event during the largest global tech conference, the DRL Vegas Championship Race will feature the world's best drone pilots, a custom-designed aerial race track, and a star-studded concert. Thousands of fans will watch twelve elite drone pilots battle it out for the coveted title of DRL World Champion. The pilots will race high-speed, custom FPV drones at 90 MPH through large scale gates around the iconic T-Mobile Arena. Drones will illuminate with a thousand LED lights while soaring through neon-colored and magenta course elements, transforming the race into the most eye-catching technology demonstration on the Las Vegas Strip.

The race will air on Saturday, February 12th and Sunday, February 20, 2022 at 1pm EST on NBC and Twitter. https://uasweekly.com/2021/10/26/the-drone-racing-league-and-t-mobile-bring-epic-championship-drone-race-to-the-las-vegas-

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strip/?utm_source=rss&utm_medium=rss&utm_campaign=the-drone-racing-league-and-t-mobile-bring-epic-championship-drone-race-to-the-las-vegas-strip&utm_term=2021-10-26

27Oct21

Pentagon favors U.S. sale of $500 million armed drones to Qatar, but State Department wary Oct. 27, 2021 Courtney Kube, Dan De Luce and Josh Lederman

An MQ-9 Reaper drone during a training mission at Creech Air Force Base in Indian Springs, Nev., in 2015.

WASHINGTON — The Defense Department is encouraging the sale of more than $500 million worth of armed drones to Qatar, even as the State Department has slow-rolled the Qatari government's request, say three U.S. officials and a congressional aide familiar with the discussions.

Qatar first asked the U.S. for armed MQ-9 Reaper drones last year, but the request has languished. Now Qatar is again pushing for the sale, leveraging the help it provided during the U.S. evacuation of Afghanistan and planning a full-court press when the country's emir, Sheikh Tamim bin Hamad Al Thani, visits Washington next month.

The Pentagon sees Qatar as a reliable partner that has proven itself responsible with advanced weapons like armed drones. Qatar could be helpful in the counterterrorism world and with "over-the-horizon strikes" in Afghanistan, meaning long-range airstrikes without U.S. boots on the ground.

Officials at the State Department, on the other hand, are concerned that the sale will anger some U.S. allies, including Saudi Arabia and the United Arab Emirates. The Qatari emir plans to visit the U.S. next month, and drones are expected to be at the top of his agenda when he meets with President Joe Biden. https://www.nbcnews.com/politics/national-security/pentagon-favors-u-s-sale-more-500-million-worth-armed-n1282413

Tecnalia Umiles San Sebastián, Spain www.tecnalia.com

Tecnalia's research and technological development center has what it says is the first air taxi in Spain. A full-scale one-passenger Vertical Take-Off and Landing prototype has already flown (tethered).

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While the current full-scale prototype has been made for one (1) passenger traveling at 90 km/h (56 mph) for a range of 15 km (9 miles), Tecnalia says the aircraft can be scaled up for a four-passenger aircraft at 190 km/h (118 mph). The aircraft has four sets of propellers powered by electric motors which are located on the four corners of the aircraft. Each propeller has its own electric engine which makes for a total of sixteen propellers and electric motors.

ATecnalia's controller technology will allow precision landing and take-offs, such as to and from a parking space and will be able to navigate the aircraft smoothly through strong wind and rain.

The company plans for the aircraft to interact with mobile phones, have plenty of space to move around and provide the passenger with a high tech experience for the urban traveler. The passenger will enter and exit easily from the rear of the aircraft. https://evtol.news/tecnalia/

DroneBase raises $20 Million for rapid expansion in renewable energy and global growth By Press 26 October 2021

Growth Round led by Euclidean Capital, includes previous investors Union Square Ventures, Upfront Ventures, Energy Transition Ventures, Hearst Ventures, Pritzker Group Venture Capital, and Valor Equity Partners

Less than five months after closing $12.5M in its Series C round, DroneBase, the leader in Intelligent Aerial Imaging, has raised another $20 million, with the round led by Euclidean Capital. The raise will fund the company's continued rapid global expansion in the renewable energy industry and other industries with high-value infrastructure.

Previous investors, focused on technology and renewable energy, include Union Square Ventures, Upfront Ventures, Energy Transition Ventures, Hearst Ventures, Pritzker Group Venture Capital, and Valor Equity Partners. https://www.suasnews.com/2021/10/dronebase-raises-20-million-to-fuel-continued-rapid-expansion-in-renewable-energy-and-global-growth/?utm_campaign=Energy%20Drone%20%26%20Robotics%20Coalition%20Content&utm_medium=email&_hsmi=175696796&_hsenc=p2ANqtz-

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28Oct21

Google's Pixel 6 Pro makes a surprisingly great drone camera [Video] Ben Schoon - Oct. 26th 2021

It's been well established that the Pixel 6 Pro's camera is great, but as it turns out it can handle more than the typical smartphone photography. Case in point, a YouTuber slapped a Pixel 6 Pro onto a drone and the results are actually pretty great.

OriginaldoBo shared the results of putting the Pixel 6 Pro on a drone earlier today on Twitter, going further in-depth in a later video. Mounted onto the drone, the video the Pixel 6 Pro captures in flight is impressive, with excellent dynamic range and shockingly good stabilization given the context.

The mount was a typical smartphone mount, but on a custom-built drone that's a bit beyond what a first-time flyer might be able to get their hands on. In the flight, the Pixel 6 Pro is set to record in 1080p at 30fps through its ultra-wide-angle lens. While that's not exactly the strongest demonstration of the cameras, the results speak for themselves. The footage captured looks better than the usual GoPro shot, but with a phone strapped to your drone, a crash might not end so well. Still, it's a fun demo with wonderful results.
https://9to5google.com/2021/10/26/googles-pixel-6-pro-makes-a-surprisingly-great-drone-camera-video/#more-70244

Airports in Italy, France to build eVTOL air taxi veliports together Bruce Crumley Oct. 27th 2021

A group of airports in Italy and France are banding together to create electric vertical takeoff and landing (eVTOL) veliport infrastructure to speed the deployment of quicker, carbon-free air taxi transportation between their respective city centers and passenger terminals.

Operators of airports in Rome, Venice, Bologna, and Nice

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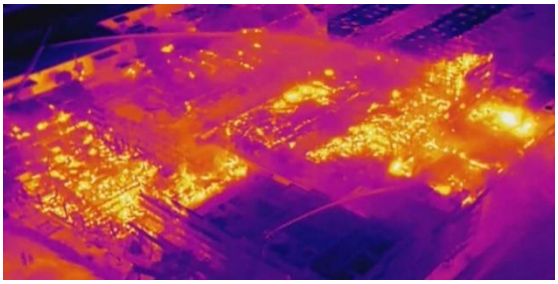
announced the creation of the jointly owned Urban Blue company. It will oversee construction and management of veliports for eVTOL air taxi services to shuttle voyagers between airline transport platforms and the cities they serve. The scheme will be developed with German urban air mobility company Volocopter and will remain open to new industrial, technology, and financial partners wanting to participate in expanding the program across Italy, France, and countries beyond.

The plan is to initiate eVTOL shuttle services between veliports around the city centers of Rome, Venice, and Nice and their airports by 2024 – the same year Paris plans to initiate Volocopter air taxi service to coincide with it hosting the Summer Olympics. As a follow up to the unveiling of Urban Blue, Volocopter is slated to begin putting one of its battery-powered aircraft on display at Rome's Fiumicino airport today.

EDF Invest, a major shareholder in Nice's Aeroports de la Cote d'Azur, will financially back Urban Blue and provide its bone fides as an established international player in the development of innovative and sustainable urban air mobility. https://electrek.co/2021/10/27/airports-in-italy-france-to-build-evtol-air-taxi-veliports-together/#more-70284

Warren, MN, uses drones, thermal sensors to map its heat-leaking homes Bruce Crumley - Oct. 27th 2021



Enterprising officials from the Minnesota town of Warren are using drones equipped with thermal sensors to gauge heat seepage from local buildings and houses as part of a public service to help homeowners cut spending on energy.

. The town is a member of the Climate Smart Municipalities Partnership, in which cities in Minnesota and Germany link up in sustainability and climate initiatives. Warren and its German oppo, Arnsberg, decided to map out their respective cities to create an accurate profile of structural insulating inefficiencies and varying losses of heat. To do that, Warren decided to fly drones equipped with thermal sensors, then combine the different photos together until they had a full municipal map.

Missions were flown late at night for clear readings during periods when seepage tends to be greatest. Once a sufficiently complete map was available to provide an accurate picture of the town's heat-leaking structures, owners of homes and office buildings were invited to learn about their levels of energy loss. Those who request that information then learn of the various

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solutions available to cut down on that waste and are offered several municipal-backed financing schemes to make those improvements possible. One of those grants work loans to applicants, who then reimburse money each month using the savings they realize on each month's energy bill. https://dronedj.com/2021/10/27/warren-mn-uses-drones-thermal-sensors-to-map-its-heat-leaking-homes/#more-70283

Vertical Aerospace announces $205 million in additional funding led by Mudrick Capital 27th October 2021

Investment will support certification and full production ramp up through to expected significant revenue generation in 2024.

London, UK – Vertical Aerospace announces over $200 million in additional financing to support production and certification of the VA-X4 electric vertical take-off and landing aircraft.

Mudrick Capital Management LP will invest $200 million in Vertical through convertible senior secured notes. In addition, Kouros SA, a firm specializing in investments to decarbonize transport and energy production, will invest $5 million in Vertical's PIPE alongside American Airlines, Avolon, Honeywell, Microsoft's M12 and Rolls-Royce.

Stephen Fitzpatrick, CEO and Founder of Vertical, said *"We are delighted to welcome Mudrick Capital and Kouros as new partners to Vertical Aerospace. Their investments are more expert validation of our technology and approach to the exciting future of zero emissions flight. We look forward to working together in the years to come to bring Urban Air Mobility to cities all over the world."* https://vertical-aerospace.com/vertical-aerospace-announces-205-million-in-additional-funding-led-by-mudrick-capital/

29Oct21

Archer Aviation VP of Design Talks Developing a Human-centric eVTOL Woodrow Bellamy III | October 28, 2021

With just over two years remaining until Archer Aviation's goal of having a four-passenger electric vertical takeoff and landing ready for a commercial launch by 2024, the California-based startup will need to make some key decisions about the design of its aircraft over the next six months.

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Last month, Archer announced two key eVTOL development program milestones, including receiving a G-1 issue paper from the Federal Aviation Administration outlining a path to certification and a merger with Atlas Crest Investment Corp. that made it a publicly traded company on the New York Stock Exchange.

The design that Archer ultimately decides upon will most likely have noticeable exterior and interior differences from the two-passenger Maker eVTOL demonstrator that they unveiled in June. While the passenger-carrying capacity of the aircraft could change, Montousse said that as of now they're initially sticking to the configuration that was announced in February along with their United Airlines partnership and purchase order, a design for one pilot and four passengers.
https://www.aviationtoday.com/2021/10/28/archer-aviation-vp-design-talks-developing-human-centric-evtol/?oly_enc_id=7021F0632090D7B

Ferrovial announces plans to deploy a network of vertiports in the UK

In Ferrovial's bid to lead a zero-carbon mobility future, the AGS Airports shareholder has announced plans to launch a network of more than 25 vertiports across the UK.

This initiative is another step in Ferrovial's bid to lead the mobility of the future through the development of infrastructure for safe, high-speed, zero carbon aviation. It follows the recently announced agreement to develop a network of more than ten vertiports in Florida.

Vertiports are essential to provide infrastructure for landing, recharging, and taking off passengers of all-electric, vertical take-off and landing (eVTOL) jet aircrafts, such as those being developed by Lilium and Vertical Aerospace. They are integrated into communities and adapted to the surrounding environment, reducing noise impact and improving energy efficiency through innovative design.

To develop the design and engineering components of the vertiport infrastructure, Ferrovial has partnered with international architecture practice Grimshaw and global engineering, management, and development consultancy Mott MacDonald.

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"The partnership between vertiports and eVTOLs will provide high speed, affordable, emissions-free travel to millions of people. This network will boost local economies with a new model of regional connectivity", said Kevin Cox, CEO of Ferrovial Vertiports.
https://www.internationalairportreview.com/news/169962/ferrovial-announces-plans-to-deploy-a-network-of-vertiports-in-the-uk/

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