UAS and SmallSat Weekly News

Contents

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Airbus Tests Autonomous UAS Takeoff Capabilities at Sea Kate O'Connor March 24, 2022

The test campaign used an optionally piloted vehicle based on a modified Guimbal Cabri G2 equipped with the autonomous take-off and landing (ATOL) system developed for the VSR700. The VSR700 is being developed by the French Armament General Directorate for France's Navy as part of its Système de drone aérien de la Marine program.

150 autonomous launches and recoveries were completed during testing which took place off the coast of Brest, France. In addition to demonstrating the ATOL system's semi-autonomous and fully autonomous modes, the trials assessed the aircraft's approach procedures before landing on the vessel along with the handling and maneuvering of the OPV on deck. The VSR700 flew for the first time in 2020 and is expected to offer a maximum takeoff weight range of 1,100-2,200 pounds.
https://www.avweb.com/recent-updates/unmanned-vehicles/airbus-tests-autonomous-uas-takeoff-capabilities-at-sea/?MailingID=864&utm_source=ActiveCampaign&utm_medium=email&utm_content=Senate+Passes+Legislation+To+Establish+Advanced+Air+Mobility+Working+Group%2C+Wally+Funk+Receives+Bob+Hoover+Trophy&utm_campaign=Senate+Passes+Legislation+To+Establish+Advanced+Air+Mobility+Working+Group%2C+Wally+Funk+Receives+Bob+Hoover+Trophy+-+Friday%2C+March+25%2C+2022

UK consortium reveals blueprint to build 165-mile drone 'Superhighway' March 24, 2022 News

A consortium led by Reading-based UTM (Unified Traffic Management) software provider Altitude Angel, is planning to build the world's largest and longest network of 'drone superhighways' which would link towns and cities across the UK – initially connecting the Midlands with the Southeast and urban conurbations along the UK's south coast.

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The consortium has submitted plans for a '165 miles (265km) drone superhighway' connecting airspace above cities including Reading, Oxford, Milton Keynes, Cambridge, Coventry, and Rugby. If the plans are approved there is an option to extend the superhighway to Southampton on the south coast and Ipswich on the east coast.

The blueprint for the superhighway, known as Project Skyway, will enable businesses to develop and grow through the commercialization of innovative drone-based products, processes, and services. A decision on whether to green light the project is expected in the coming weeks. https://uasweekly.com/2022/03/24/uk-consortium-reveal-blueprint-to-build-165-mile-drone-superhighway/?utm_source=rss&utm_medium=rss&utm_campaign=uk-consortium-reveal-blueprint-to-build-165-mile-drone-superhighway&utm_term=2022-03-25

Involi launches new generation drone tracker fully compatible with regulations

March 24, 2022 News

The LEMAN RemoteID drone tracker has been conceived to be used by drone operators in all simplicity. In fact, it is independent (it does not need to be connected to the drone's battery to work) and it is easy to use. It starts transmitting its position just after turning it on. The tracker is lightweight (47 g), resistant to rain, and has an autonomy of 4 hours and 30 min for a refresh rate every 1 second, making it adapted for all drone operations.

INVOLI wants to make it easy for drone operations to be carried out in compliance with the ever-evolving regulatory framework and adapts its products accordingly. The new INVOLI drone tracker has been developed to follow the ASTM Remote ID Standard F3411-19, and thus it complies with the FAA Rule on Remote Identification for UAs and with the Commission Implementing Regulation.

The drone tracker transmits position and identification in two ways: direct broadcast over Wi-fi frequency (Remote ID Broadcast) and over 4G network (Network Remote ID), with a version for European 4G bands and a version for North America. https://uasweekly.com/2022/03/24/involi-launches-new-generation-drone-tracker-fully-compatible-with-regulations/?utm_source=rss&utm_medium=rss&utm_campaign=involi-launches-new-generation-drone-tracker-fully-compatible-with-regulations&utm_term=2022-03-25

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UK consortium completes UAM CONOPS for aviation authority Asian Aviation Staff 24/03/2022

Eve UAM, an Embraer company, has announced the completion of the Concept of Operations (CONOPS) for airspace integration of Urban Air Mobility (UAM) in the UK. Led by Eve, the UK Air Mobility Consortium consists of global companies with expertise that span the aviation industry, including NATS, Heathrow Airport, London City Airport, Skyports, Atech, Volocopter, and Vertical Aerospace, and developed the project in partnership with the UK Civil Aviation Authority (CAA) Innovation Hub through its Regulatory Sandbox.

The CAA's Regulatory Sandbox offers organizations or consortia the opportunity to test and trial the viability of their innovative solutions, while also helping the regulator shape future regulations in line with their novel technologies and concepts. In January 2021, our consortium was selected by the CAA to join the Sandbox on its Future Air Mobility Challenge to develop a strategic framework that will define the low-level airspace designs, procedures, and infrastructure for safely integrating new types of UAM operations across the UK.

The first major milestone from the project was the compilation of a baseline describing key regulatory challenges which need to be addressed to enable safe, efficient, and scalable zero-emission UAM operations. The consortium used this baseline to identify which areas to focus on to ensure the proposed concepts consider the criteria previously aligned with the regulator.

The CONOPS was developed as a London-centric case study, transporting passengers within a network of vertiports from Heathrow Airport to London City Airport. The consortium followed a rigorous process to develop the concepts, including interactive reviews from the CAA Innovation Hub and a range of its subject matter experts, incorporating their feedback into the final document. It also leveraged quantitative data derived from computer simulations to support its proposed concepts, as well as a series of stakeholder engagement activities to better understand concerns and needs related to UAM operations. https://asianaviation.com/uk-consortium-completes-uam-conops-for-aviation-authority/

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BTS video shows how Michael Bay got those insane drone shots for 'Ambulance'

Ishveena Singh - Mar. 25th 2022

Michael Bay's latest movie, *Ambulance*, will hit the theaters on April 8. Ahead of the release, a new behind-the-scenes video has dropped this week, showing how the director used FPV drones to pull off some spectacular shots in the pulse-pounding heist thriller.

Based on a 2005 Danish film of the same name, *Ambulance* tells the story of two bank robbers who hijack an ambulance occupied by a paramedic and a patient in critical condition. In keeping with Bay's signature style, the action sequences are extremely fast paced. And what better than a small FPV drone to get right in the middle of the action and capture shots that otherwise wouldn't have been possible?!

Bay's fascination for the best, most innovative camera technology is no secret. Producer Michael Kase, who's done nine movies with Bay to date, says one of his first jobs on every production is to find the "newest, coolest gear out there." On this one, it's FPV drones.
https://dronedj.com/2022/03/25/michael-bay-fpv-drone-ambulance/

Airgility To Participate in MoSAIC Challenge by US DoD & Israeli Ministry of Defense

College Park, MD -- Airgility is pleased to announce that it has been selected to participate in the Final Round of Competition for the MoSAIC Challenge.

The US Department of Defense (DoD), the Israeli Ministry of Defense (IMOD) and the Merage Institute are holding this Mobile Standoff Autonomous Indoor Capabilities, or MoSAIC challenge to advance innovative technological solutions for remote autonomous indoor missions.

The MoSAIC challenge is divided into five mini-challenges, three of them virtual challenges and two of them physical challenges that include: indoor navigation, room

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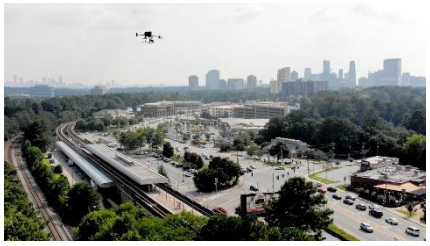
mapping, human/object tagging, and tactical robotic systems and human presence detection. The MoSAIC challenge application process, which was conducted in the Summer of 2021, will award cash and other prizes totaling $600,000 to startups and innovators worldwide who produce the best solutions.

The MoSAIC Challenge is part of a memorandum of agreement between the U.S. DoD Irregular Warfare Technical Support Directorate and IMOD Directorate of Defense Research and Engineering. https://mailchi.mp/airgility/mosaic-challenge

27Mar22

Metro Atlanta police are using drones to respond to 911 calls Kristal Dixon Mar 21, 2022 - News



Departments interviewed by Axios use drones for 911 calls, active police investigations, SWAT situations, crowd monitoring and control at events, photographing accidents and search and rescue.

In late 2020, the city of Brookhaven introduced a program using drones to respond to 911 calls. Officers still respond to these calls, but the drones often arrive first, said police Lt. Abrem Ayana.

Major Jeff Cantin with Atlanta police says during a SWAT call, officers can fly a drone into a building to talk to a person before sending in an armed team.

In Sandy Springs, in addition to police department use, the city can request drones to take aerial photos of intersections for public works projects, Sgt. Sam Worsham tells Axios. Its first drone, which was donated, was shot down during a SWAT operation by a suspect who barricaded himself inside an apartment. “We’d rather lose a piece of equipment than lose an officer any day,” Worsham tells Axios.
https://www.axios.com/local/atlanta/2022/03/21/atlanta-police-drones-911-call

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Avio Aero to supply Catalyst engines for Eurodrone fleet Craig Hoyle 25 March 2022

GE Aviation's Catalyst engine will power a future four-nation fleet of Eurodrone unmanned air vehicles following a selection decision by prime contractor Airbus Defence & Space.

The four-nation Eurodrone platform will be powered by Catalyst turboprops

"The Catalyst was identified as the best solution based on superior performance, lower developmental risk, better in-service economics as well as growth potential," says Airbus Defence & Space head of military aircraft Jean-Brice Dumont.

A joint effort involving France, Germany, Italy and Spain, the Eurodrone program will deliver a combined 20 systems, each including three medium-altitude, long-endurance UAVs and supporting ground infrastructure. A joint development and production contract was approved on 24 February 2022, with first flight of a single prototype aircraft scheduled to be performed from Manching in Germany within five years. https://www.flightglobal.com/defence/avio-aero-to-supply-catalyst-engines-for-eurodrone-fleet/148054.article

Air Greenland to Partner with Avolon and Purchase Vertical Aerospace's VX4 eVTOL Aircraft Jessica Reed | March 25, 2022

Air Greenland's new partnership with Avolon includes an agreement to purchase or lease multiple eVTOL aircraft made by Vertical Aerospace—the VX4.

In a new partnership, Avolon and Air Greenland will form a Working Group to examine the potential of commercial zero-emission air travel in Greenland. Air Greenland has also committed to a purchase or lease of electric vertical take-off and landing (eVTOL) aircraft from Avolon; the eVTOLs will be manufactured by Vertical Aerospace, maker of the five-seater, zero-emission VX4 aircraft.

Once both companies assess the market opportunity, they will be able to determine the number of VX4 eVTOLs necessary for Air Greenland's fleet. The current fleet includes 17

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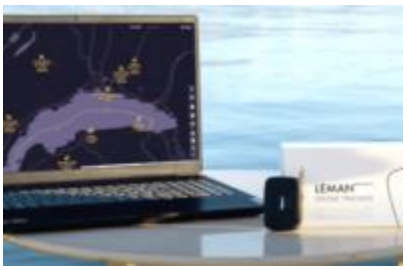
helicopters, fixed-wing aircraft (Airbus A330-200 and 7 Dash 8-200) for passenger and cargo transportation, and a King Air for medical evacuation.
https://www.aviationtoday.com/2022/03/25/air-greenland-partner-avolon-purchase-vertical-aerospaces-vx4-evtol-aircraft/

Remote ID Drone Tracker: LEMAN RemoteID from INVOLI [VIDEO] Miriam McNabb March 27, 2022 by DRONELIFE Staff Writer Ian M. Crosby



Air traffic solution provider INVOLI has released the LEMAN RemoteID, an innovative drone tracker created to meet the newest CE/FCC regulations.

Made to be simple to use for all drone operators, the LEMAN RemoteID operates independent of the drone's battery and begins transmitting its position after being powered on over both Wi-fi and 4G networks. The compact, lightweight tracker is rain resistant and boasts an autonomy of 4 hours and 30 min with a refresh rate every second.

In an effort to make it simpler to carry out drone operations in compliance with always-changing regulations, the INVOLI team keeps track of and adapts its products to the evolving legislation. The LEMAN RemoteID was designed to follow the ASTM Remote ID Standard F3411-19, complying with the FAA Rule on Remote Identification for UAs and with the Commission Implementing Regulation (EU) 2019/947. https://dronelife.com/2022/03/27/remote-id-drone-tracker-leman-remoteid-from-involi-video/

Terra Drone Financing on a Roll: $70M in Series B Funding Miriam McNabb March 27, 2022 by Ian M. Crosby

Drone and Urban Air Mobility leader Terra Drone Corporation has announced that it has closed $70 million in its Series B funding round, receiving investments from Mitsui & Co., Ltd., SBI Investment Co., Ltd., Tokyu Land Corporation, Kyushu Electric Power T&D, and Seika Corporation.

The Series B round also saw public-private infrastructure fund Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development provide funding for the recently established joint venture, with additional contribution by established investor Venture Lab Investment. https://dronelife.com/2022/03/27/terra-drone-financing-70-million-series-b-raise-to-accelerate-growth/

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New York coalition applies for regional funding to further develop drone operations March 25, 2022 Jenny Beechener UAS traffic management news

CenterState CEO and a coalition of 57 public, private, nonprofit, academic and for-profit entities across Central New York and the Mohawk Valley joined together to submit a phase two application for the Build Back Better Regional Challenge, a central component of the US Economic Development Administration's American Rescue Plan. These coalition partners proposed nine distinct and interconnected projects that would leverage more than $143 million against a federal investment of $92 million to advance opportunities in the region's emerging "smart systems" cluster, while also integrating large-scale workforce development programs to ensure that regional growth is inclusive and equitable.

"Funding through the BBBRC would accelerate the commercial application of drones in the healthcare industry, providing cost-effective, contactless delivery solutions while improving healthcare equity for underserved populations and others in need. Additionally, these efforts will minimize negative impacts on service delivery and manpower shortages due to future crippling events such as pandemics and supply chain disruptions," said Ken Stewart, CEO of NUAIR. https://www.unmannedairspace.info/latest-news-and-information/new-york-coalition-applies-for-regional-funding-to-further-develop-and-deploy-drone-operations/

Volocopter Conducts First Crewed eVTOL Flight in France March 28, 2022 News

On 21 March 2022, Volocopter became a two-time pioneer as the first eVTOL developer to conduct both crewed and remotely piloted test flights in France. The crewed flights were part of a week-long urban air mobility (UAM) test campaign that will give Volocopter and its partners – Groupe ADP and RATP Group – key insights for subsequently launching the UAM industry in time for the 2024 Paris Olympic and Paralympic Games.

Volocopter's full-scale testing prototype, the 2X, was used to perform successful flight tests at Pontoise airfield in Paris to measure the aircraft's noise emissions. This data will be used by the company's partners to shape the future of urban air mobility services in and around Paris.

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UAM refers to a subcategory of advanced air mobility (AAM) and how advanced aircraft (i.e., eVTOLs) can operate in and around cities. The UAM testing sandbox at Pontoise airfield addresses the challenges of this new form of mobility directly by assessing UAM solution use, acceptability, regulations, technologies, and industrialization. The airfield offers a secure aeronautical environment in a suburban area, 35 km northwest of Paris.
https://uasweekly.com/2022/03/28/volocopter-conducts-first-crewed-evtol-flight-in-france/?utm_source=rss&utm_medium=rss&utm_campaign=volocopter-conducts-first-crewed-evtol-flight-in-france&utm_term=2022-03-28

BRINC delivers specialized Lemur drones to Ukraine rescuers Bruce Crumley - Mar. 28th 2022

On Sunday, Blake Resnick, BRINC CEO, returned from a trip to an undesignated spot along the Polish border where he delivered $150,000 in BRINC drones and material to members of Ukraine's Emergency Services working to find, reach, and treat people injured in Russian assaults. The move marks yet another effort not only by UAV manufacturers, but also countless companies, charitable organizations, and private people to assist Ukraine's defense against the nightmarish Russian onslaught. In BRINC's case, that meant donating its Lemur drones designed to be tools for forces responding to disaster situations – and supplying quick training to Ukrainian recipients for most effective use.

"Their spirit and determination in the face of evil and unbelievable pressure is remarkable and we just want to do everything we can to help," Resnick – who himself is of Ukrainian heritage.

Resnick, 22, made the trip to Poland's border area with Ukraine for the exchange of 10 BRINC drones and a two-day training event of rescue workers who will now pilot them. The encounter was arranged with the assistance of the nonprofit Ukraine Freedom Alliance that's attempting to better channel the flow of supplies, help, and even volunteers from abroad to the country's defense efforts. That, according to Resnick, followed the Ukrainian government's earlier appeal to BRINC for support in its struggle against the Russian invaders.
https://dronedj.com/2022/03/28/brinc-delivers-specialized-lemur-drones-to-ukraine-rescuers/

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How the new DJI M30 drone helped save a life even before launch Ishveena Singh - Mar. 28th 2022

Like other tech companies, DJI also gets its products into the hands of "real users" before they are launched officially. One such beta tester for the newly announced Matrice 30 enterprise drone was the Weber County Search and Rescue – a volunteer organization assigned to assist the Weber County Sheriff's Office in the state of Utah. Incredibly enough, the SAR team was able to witness the lifesaving capabilities of the DJI M30 drone firsthand when a snowboarder became stranded in North Fork.

As Lt. Mark Horton from the Weber County SAR team recalls the incident. He says the M30 not only found the missing person "within 10 minutes of being on scene," but the drone also helped map out an escape path, letting rescuers know "the safest way to get off the mountain without getting into more trouble."

To reassure the snowboarder that he had been found, the rescue team put an aerial spotlight on the man, which drone operator Kyle Nordfords explains "was great for him to be able to look up, see the drone, and know that he was found."

Overall, the team says the M30 series drone cut the rescue mission time in half, with Horton saying: It just makes the rescue so much faster and safer for everybody involved, from our patient to also our heroes, our rescuers on the ground. https://dronedj.com/2022/03/28/dji-m30-drone-rescue-weber-county/#more-78607

29Mar22

Skyports Raises $23 Million in Series B Miriam McNabb March 28, 2022 Ian M. Crosby

Existing shareholders such as Deutsche Bahn Digital Ventures, Groupe ADP, Solar Ventus, Irelandia and Levitate Capital all contributed to the round, with several significantly increasing their stake.

Previous investors were joined by Japanese conglomerate Kanematsu Corporation which will take a seat on the board.

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Other new investors include global industrial property group Goodman Group, Italian airport platform 2i Aeroporti, backed by Ardian's Infrastructure Fund and F2i Italian Infrastructure Fund, and US based VC firm GreenPoint.

The new funding and backing from investors will provide Skyports with the ability to increase the speed of its electric air taxi operations, supplying take-off and landing infrastructure in key launch markets, and scale its Drone Services practices in new and existing markets in the UK, Europe and Asia. https://dronelife.com/2022/03/28/skyports-raises-23-million-in-series-b/

FLYTREX FOLLOWS WING IN TEXAS DRONE DELIVERY VENTURE March 28, 2022 Sally French

The company that is perhaps most famous for its drone delivery operations in Iceland is heading to the Lone Star State. Flytrex will partner with restaurant company Brinker International (which is the parent company of major chains including Chili's Grill & Bar and Maggiano's Little Italy) to deliver food in Granbury, Texas, which is a small town just outside of Dallas-Fort Worth. Flytrex will also partner with Causey Aviation Unmanned to execute the deliveries.

Eligible Granbury residents will be able to order food via the Flytrex app from participating restaurants, which will then send food via drones to their backyards.

While Beyond Visual Line of Sight (BVLOS) drone flights are currently not legal for the general population of drone flights — making most drone deliveries difficult or impossible — this operation is made possible due to a newly-granted Federal Aviation Administration waiver that allows the companies to operate over a delivery radius of one nautical mile. That enables Flytrex to reach thousands of potential homes. https://www.thedronegirl.com/2022/03/29/flytrex-follows-wing-in-texas-drone-delivery-venture/

EASA PUBLISHES FIRST GUIDANCE ON URBAN AIR MOBILITY VERTIPORT DESIGN

GREGORY POLEK MARCH 24, 2022 SOURCE: EASA VERTIPORT DESIGN SPECIFICATIONS

FutureFlight
THE FUTURE OF ADVANCED AIR MOBILITY

The European Union Aviation Safety Agency published the world's first guidance for the design of vertiports needed for the safe operation of Urban Air Mobility services such as air taxis in locations

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across Europe. The Prototype Technical Design Specifications offer guidance to urban planners, local decision-makers, and industry stakeholders to aid in the design of facilities that will serve VTOL aircraft.

"Urban air mobility is a completely new field of aviation, and we have a unique opportunity to develop a set of infrastructure requirements from scratch," said EASA executive director Patrick Ky. "With the world's first guidance for safe vertiport operations, EASA's ambition is to provide our stakeholders with the 'gold standard' when it comes to safe vertiport design and operational frameworks. By harmonizing design and operational standards for vertiports, we will support Europe and around the world to make new urban air mobility a reality."

EASA announced the guidance on March 24, saying it offers new and innovative solutions specifically for congested urban environments where many vertiports will exist.

The agency has one notable innovation—the concept of a funnel-shaped area above the vertiport— as "obstacle-free volume." The concept applies directly to the operational capabilities of the new VTOL aircraft, which can perform landing and take-off with a significant vertical segment. https://www.futureflight.aero/news-brief/2022-03-24/easa-publishes-first-guidance-urban-air-mobility-vertiport-design

AI Software and Drones Keep Marathoners Safe YULIYA KLOCHAN MARCH 18, 2022

Without knowing it, the 40,000 runners at the 2022 Tel Aviv Samsung Marathon in February experienced a new way to keep them safe: a network of multiple patrolling and three tethered drones. The UAS came in different makes and models, from personal drones operated by individual police officers to large industrial ones such as the DJI Matrice 300 RTK. What united the network was the Airwayz Drones' Unmanned Aircraft System Traffic Management software that collected and analyzed data using AI to ensure safe operation in the urban environment.

Airwayz, a Tel Aviv, Israel-based company founded in 2018, first used its software to aid Israeli authorities in a search and rescue mission during the Gaza operation, when drones were deployed to search for casualties among the debris. "Dynamic UTM enabled different kinds of authorities to operate together, just seemingly helped them gain more control in real time, and have them optimize the operation," said Eyal Zor, CEO and co-founder of Airwayz. As the

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company's second major collaboration with Israeli agencies, the marathon was supervised and coordinated by Ayalon Highways, an Israel-based company that specializes in infrastructures, mass transit and shared transit systems, from its Command Centre in Tel Aviv.
https://insideunmannedsystems.com/ai-software-and-drones-keep-marathoners-safe/

New Solar Powered UAV Boasts 10 Hour Flight Time Phoebe Grinter / 23 Mar 2022

UAV Instruments has developed a solar powered fixed-wing Unmanned Aerial Vehicle (UAV) with solar panels in its wings that enable a non-stop flight time of up to 10 hours.

With a maximum take-off weight of 4 kilograms, the CIES 2.2 Solar Powered (SP) UAV has a range of up to 100 kilometers at a cruise speed of 30 knots and is able to withstand 20 knots of windspeed and 27 knots of gusts.

The CIES 2.2 SP is designed for photogrammetry, surveying, remote sensing, reconnaissance, or precision agriculture. UAV Instruments offers three different payload options: a 20.1 MP RGB camera, Micasense Rededge, or Micasense Altum. The company is hoping to integrate a new camera with advanced functions including video streaming and the ability to follow targets and identify license plates or faces, with the aim of placing it at the service of environment protection and public safety customers. https://www.unmannedsystemstechnology.com/2022/03/solar-powered-uav-with-10-hour-continuous-flight-time/?utm_source=UST+eBrief&utm_campaign=217a181c43-ust-ebrief_2022-mar-29&utm_medium=email&utm_term=0_6fc3c01e8d-217a181c43-119747501&mc_cid=217a181c43&mc_eid=0d642a9d48

Wingcopter wins ITOCHU as a strategic investor and authorized partner in Japan

March 29, 2022

German drone delivery pioneer Wingcopter has announced the signing of a strategic partnership agreement with ITOCHU Corporation. ITOCHU joins Wingcopter's Authorized Partnership Program (WAPP) and will act as a dedicated distributor and lessor for the Wingcopter 198, Wingcopter's new eVTOL delivery drone, in Japan. On top, the Japanese conglomerate also decided to make a strategic investment in

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Wingcopter. With an annual trading revenue of $93 billion, ITOCHU is one of the largest Japanese general trading companies employing 125,000 employees worldwide.

The WAPP is Wingcopter's global network of strategic partners. Authorized partners include drone operators, resellers, and agents that are trained and allowed to operate, promote, lease, and distribute the Wingcopter 198 technology in their respective regions. In late 2021, Wingcopter had announced business aviation specialist SYNERJET Corp as an Authorized Partner for Latin America. The partnership with ITOCHU further strengthens Wingcopter's expansion in Japan, one of the most important markets for drone delivery in the future, given the country's progressive approach to integrating drones into everyday life. Based on a steadily growing number of partnership requests, Wingcopter is looking to onboard more partners, continuously expanding Wingcopter's reach throughout the world.

ITOCHU joins existing investors SYNERJET, DRONE FUND, Expa, Xplorer Capital, Futury Capital, Hessen Kapital III, and Corecam Capital Partners. https://uasweekly.com/2022/03/29/wingcopter-wins-itochu-as-a-strategic-investor-and-authorized-partner-in-japan/?utm_source=rss&utm_medium=rss&utm_campaign=wingcopter-wins-itochu-as-a-strategic-investor-and-authorized-partner-in-japan&utm_term=2022-03-29

DMI raises $22 million for drone hydrogen cell development Bruce Crumley - Mar. 29th 2022

South Korean developer of hydrogen power units for drones, Doosan Mobility Innovation (DMI), has raised $22 million in new funding to muscle up its production of longer-flying, emission-free water-based fuel cells for drones.

While the infusion will support its continuing development of hydrogen power generally, it will be focused on fuel cells for cargo drones used by logistics clients. In addition to being cleaner than gas-burning options and less polluting to break down than spent lithium-ion batteries, hydrogen tech powers UAV flights nearly four times longer – and boasts longer total life span – than chemical cells.

DMI said the funds will permit it to muscle up its existing product lineup, enhance overseas sales capacities, attract top R&D talent, and speed development of water-cooled fuel cells applicable to wide range of drone transportation, particularly logistics.

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The greater power reserves of hydrogen power cells allow drones to perform missions of over two hours, supporting applications like security surveillance, emergency rescue support, asset and property patrols and surveys, and logistics operations over both land and water. The new infusion from DG Capital, Korea Investment Partners, and DS Asset Management, DMI says, will help strengthen performance in those areas, and permit expansion into additional uses. https://dronedj.com/2022/03/29/dmi-raises-22-million-for-drone-hydrogen-cell-development/

Vertical Aerospace cheers strong demand for its eVTOL air taxi craft Bruce Crumley - Mar. 29th 2022

Vertical Aerospace, a UK developer of aircraft for future air taxi and other urban air mobility uses, is reporting stronger than expected demand for its electric vertical takeoff and landing (eVTOL) vehicles, with a major leasing client circling back for additional orders.

Vertical Aerospace announced Tuesday that aircraft leasing giant Avolon has already found clients for the 500 eVTOL VX4s planes it bought last June and is signing up for an additional 50 to keep pace with demand. That news came in the wake of Vertical Aerospace's successful $300 million New York Stock Exchange flotation in December, and earlier activity including an exploratory partnership with Heathrow Airport to study air taxi services between the platform and central London.

Avolon, the world's second-largest lessor of air vehicles, signed a deal to buy a whopping 500 VX4 eVTOL aircraft from Vertical Aerospace in June worth $2 billion. Within nine months of that deal, the company had not only found clients wanting to operate all of them, but also an additional 50 craft that Avolon has optioned. That brings Vertical Aerospace's conditional pre-order tally for the VX4 to $5.4 billion. https://dronedj.com/2022/03/29/vertical-aerospace-cheers-strong-demand-for-its-evtol-air-taxi-craft/#more-78734

Treeswift raises $4.8 million to capture forest data with LiDAR drones Ishveena Singh - Mar. 29th 2022

Treeswift's LiDAR-equipped drones are capable of navigating under the forest canopy independently. So, unlike satellite or aerial imagery that forest researchers typically rely on, these drones can collect terabytes of data from the ground up at

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unprecedented detail. The drone-based approach is also 10x faster compared to manual processes wherein foresters go out into the woods, earmark samples of land, calculate the trees by hand using a tape measure, and extrapolate the sample numbers into estimates about forest size and biomass.

Once Treeswift's drones collect the data, machine learning algorithms come into play to create high-resolution 3D forest reconstructions. These 3D maps display the finest details of every tree, and can be analyzed for measurements of any forest's biomass.

Applications include inventory calculation for the timber industry, mapping forests for preservation, and measuring forest biomass and fuel to prevent the spread of wildfires. https://dronedj.com/2022/03/29/treeswift-forest-data-lidar-drones/#more-78690

30Mar22

When Will We See Passenger Drones? Volocopter CEO from Amsterdam Drone Week Miriam McNabb March 29, 2022

Volocopter CEO Florian Reuter took the floor at Amsterdam Drone Week, the EASA High Level Conference on Drones, to discuss bringing urban air mobility to life. "We're at the start of a transformation of the way that we live mobility. The world will look very different 20, 30 years down the road."

In 2011, Volocopter made it to the Guinness Book of World Records by proving that eVTOL passenger flight was possible – and 5 years later, they were able to fly a person in their passenger eVTOL, now called VoloCity. Since then, they've done many test flights in cities around the world showing people that automated eVTOL flight is real.

When Will We See Passenger Drones Take Flight? The answer, says Reuter, is soon: the company has more than 1,000 test flights planned, all with full approval of local air authorities. The VoloCity will be operated initially as a manned aircraft but is designed to allow autonomous flight as regulations allow. In addition, Volocopter plans to launch during the Paris Olympics in 2024. The eVTOL has a range of 35 km, but as Reuter points out, "35 km covers a megacity like Paris easily from end to end." https://dronelife.com/2022/03/29/when-will-we-see-passenger-drones-volocopter-ceo-florian-reuter/

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Zipline drones deliver one million COVID vaccinations in Ghana Bruce Crumley - Mar. 30th 2022

Zipline made the announcement on Wednesday, accompanied by findings of a qualitative study on how the company's automated, on-demand drone deliveries have benefitted Ghana's healthcare system more broadly. The one million Covid-19 doses distributed was part of the more than five million vaccines jabs against various diseases Zipline UAVs have transported in Ghana since starting operation in the country in 2019.

"Our partnership with Zipline has played a vital role in Ghana's administration of COVID-19 vaccines to combat the pandemic and foster healthier communities," said Dr. Patrick Kuma-Aboagye, director general of Ghana Health Service. "Through Zipline's automated, on-demand delivery service and other efforts by the government, we've been able to rapidly and equitably distribute vaccines to many parts of the country."

Though active in an increasing number of nations across Africa, Ghana was one of the earliest countries to partner with Zipline to improve healthcare through drone deliveries. To date, the company's UAVs have flown 13 million miles around the nation delivering blood products, medicines, and sundry medical supplies to six distribution centers serving over 15 million people. https://dronedj.com/2022/03/30/zipline-drones-deliver-one-million-covid-vaccinations-in-ghana/

31Mar22

The City of Amsterdam's Strategy for Dealing with Unauthorized Drone Activity Miriam McNabb March 30, 2022

At Amsterdam Drone Week today, Commercial UAV Expo sponsored a panel of experts from all over Europe to discuss security and counter drone strategies. Robotics expert Gokul Srinivasan says that CUAS technology solutions can also be categorized: kinetic solutions for mitigating drone threats include high energy laser, high energy electromagnetic pulse, air defense systems, drone vs. drone, and simple handguns. Non-kinetic solutions involve spoofing or jamming.

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The City of Amsterdam has a population of about 1 million and hosts nearly 20 million visitors each year. From the public safety perspective, says Joshua Serrao of the City of Amsterdam, city police use drones for crime scene investigation, forensic investigation, and crowd monitoring. However, "criminals do innovate," he says. "We're seeing a lot of contraband deliveries."

The City has adopted a framework of the roles that cities and police must adopt with respect to drones:

1. **Regulator**: establishing local regulations like no-fly zones at certain times or places
2. **User:** pursuing drones as a tool for city development and policing
3. **Facilitator**: helping the drone industry thrive
4. **Protector**: protecting citizens from the negative effects of drones – which means considering the roles of drones in urban planning, as well as implementing counter UAS strategies.

https://dronelife.com/2022/03/30/security-and-counterdrone-from-the-floor-of-adw-the-city-of-amsterdams-strategy-for-dealing-with-unauthorized-drone-activity/

FedEx Express to Test Elroy VTOL for Autonomous Middle Mile Cargo Delivery

Woodrow Bellamy III | March 30, 2022

FedEx Express, the regional subsidiary of FedEx Corp., has a new partnership agreement with Elroy Air aimed at flight-testing their autonomous vertical takeoff and landing (VTOL) air cargo system for middle-mile logistics operations by 2023.

Elroy Air revealed its pre-production vertical takeoff and landing aircraft, the Chaparral—which could become the first end-to-end autonomous VTOL air cargo system—in January. Headquartered in San Francisco, the startup has received funding from Catapult Ventures, Lockheed Martin Ventures, Marlinspike Capital, and Prosperity7 Ventures, in addition to various angel investors.

The new agreement between the two companies is a "first of its kind agreement," according to the March 30 announcement from FedEx Express, which plans to test the Chaparral's ability to fly shipments between its various sortation facilities.

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Chaparral is being developed with a hybrid-electric architecture and an in-flight rechargeable lithium battery to be capable of carrying cargo weighing up to 500 pounds with a maximum range of 300 miles. An early prototype of Elroy's Chaparral was first flown in 2019. Today, the model possesses eight vertical lift fans, four distributed electric propulsors, and updated systems for ground autonomy and cargo handling.
https://www.aviationtoday.com/2022/03/30/fedex-express-test-elroy-vtol-autonomous-middle-mile-cargo-delivery/

U.S. sends 100 killer drones called Switchblades to Ukraine MAR 30 2022 Amanda Macias@AMANDA_M_MACIAS

WASHINGTON – The U.S. included 100 killer drones in a colossal weapons package for Ukraine that President Joe Biden approved earlier this month, U.S. officials confirmed Wednesday..

"We have committed 100 Switchblade tactical unmanned aerial systems to be delivered in the most recent package of presidential drawdown," Celeste Wallander, assistant secretary of Defense for international security affairs, said in testimony before the House Armed Services Committee.

The decision to equip Ukraine with killer drones, dubbed Switchblade, follows Ukrainian President Volodymyr Zelenskyy's request to U.S. lawmakers for additional military equipment.

Deploying Switchblades to the fight in Ukraine could be the most significant use of the weapons in combat, as it is not clear how often the U.S. military has used the killer drones on the battlefield. https://www.cnbc.com/2022/03/30/us-sends-100-killer-drones-called-switchblades-to-ukraine.html

An elite Ukrainian drone unit exploits the cover of night to destroy Russian tanks Alia Shoaib Mar 20, 2022

An elite Ukrainian drone unit is destroying weaponry of the invading Russian forces as their soldiers sleep, The Times of London reported Friday.

Russian forces stop moving during the night and typically place their tanks among houses in villages where conventional artillery cannot strike them, Yaroslav Honchar, the unit commander based in Kyiv, told the paper.

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But the elite drone unit, which has dozens of squads of expert drone pilots, has these stationary vehicles in its crosshairs. "We strike at night, when Russians sleep," Honchar told the paper. "We look specifically for the most valuable truck in the convoy and then we hit it precisely, and we can do it really well with very low collateral damage," the soldier said. "Even in the villages, it's possible. You can get much closer at night."

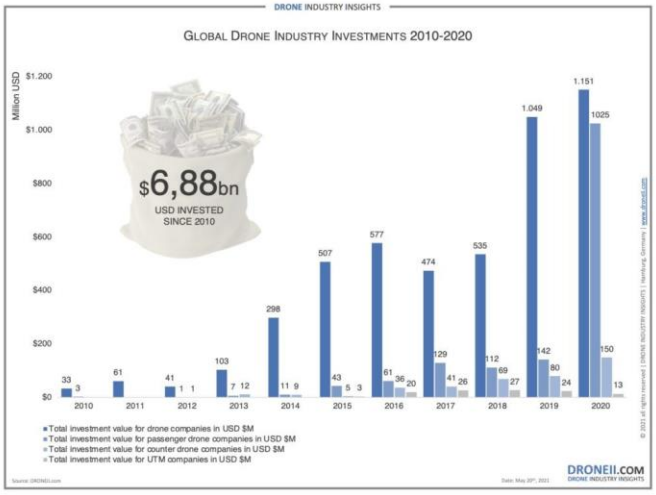
The unit's arsenal of drones ranges from cheap commercial ones to heavy-duty octocopters that have been modified to drop anti-tank grenades and to see with thermal cameras, according to the paper.

The R18 drone has a 4-kilometer range — about 2½ miles — and its capacity to drop 11-pound bombs is particularly prized by Honchar's drone warriors. The team also uses the PD-1, or Punisher drone, developed by Ukraine, that can carry about 6½ pounds of explosives up to 30 miles away. https://www.businessinsider.com/ukrainian-drone-unit-strikes-russian-targets-while-they-sleep-the-times-2022-3?r=US&IR=T

Thanks to Gordon Pendleton with Cordillera Applications Group in the UK for this article.

1Apr22

DRONEII's Kay Wackwitz: 3 Observations on the 2022 Drone Industry Miriam McNabb April 01, 2022



As the DRONEII infographic shows, almost $7 billion went into drone and passenger drone industry by 2020. That trend continues in the 2022 drone industry – the investment appetite is so strong that DRONEII has started a matchmaking service between drone companies and investors to meet the demand.

Wackwitz says there are several reasons why investment has continued to grow. "People saw an opportunity in the

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pandemic," says Wackwitz. "The concept of remote work quickly became a reality: we got transformed by something bigger than the plans of a CEO, and we had to adapt to keep working. Investors see an opportunity to capitalize on this."

Additionally, says Wackwitz, the industry has matured enough to attract new interest. "People trust the technology now. The hype is gone, but the trust is real – people don't see drones as a toy anymore, but as a real tool. The long-awaited consolidation is picking up pace. We saw 41 mergers and acquisitions last year." https://dronelife.com/2022/04/01/droneiis-kay-wackwitz-3-observations-on-the-2022-drone-industry/

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