UAS and SmallSat Weekly News

Contents

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26May23

New Payload for Wingtra VTOL Drones

Miriam McNabb May 24, 2023 by DRONELIFE Staff Writer Ian M. Crosby

Leading VTOL drone producer Wingtra has revealed its new RGB61 sensor payload. Compatible with the WingtraOne GEN II drone, the RGB61 paves the way forward for the entire drone mapping industry. The Sony Alpha 7 Mark IV 61MP RGB camera has been customized to provide the most efficient, data-light UAV data solution available, with in-app light-settings control and ultra-high accuracy image capture.

"Because RGB61 allows you to capture 600 ha (1480 ac) in two flights, instead of three, and process 40 % less data for the same area, customers are going to be able to map large areas in tighter time windows, plus take on more projects due to dramatically faster turnaround times," said Wingtra Product Manager Julian Mackern. "Imagine if you had a project that would take nine flight hours to cover before, and you could now do it in six but with roughly half the images to process. Because that is what you can do with this payload. All with richer image detail." https://dronelife.com/2023/05/24/new-payload-for-wingtra-vtol-drones-rgb61/

The FAA Creates a New Advisory Rulemaking Committee to Increase Drone Safety

Juan Plaza MAY 18, 2023

How do we deploy large amounts of uncrewed vehicles into the most complex airspace system in the world while maintaining the same levels of accuracy and safety? This is the question keeping Federal Aviation Administration officials awake at night while they ponder the great benefits that drones and air taxis will bring to society in general and commercial aviation.

On March 16, 2023, the FAA announced the creation of a new Aviation Rulemaking Committee that will be known as "383 ARC." It requires the FAA Administrator to work with the Secretaries of Defense and Homeland Security and the heads of other relevant federal departments and agencies to ensure that technologies/systems that are developed, tested, or deployed by federal departments and agencies to detect and/or mitigate potential risks posed by errant or

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hostile UAS operations do not adversely impact or interfere with safe airport operations, navigation, air traffic services, or the safe and efficient operation of the National Airspace System." https://www.commercialuavnews.com/regulations/the-faa-creates-a-new-advisory-rulemaking-committee-to-increase-drone-safety?mkt_tok=NzU2LUZXSi0wNjEAAAGL8w1eNnvrxfjs7HTgXoOKXTrml2oTL50FbIW57qNWIf-FW-ZZ_4-6c2xDy_02lfSWs5GDhImoC8iDRuQxMiSpvB186QSAzwnEXjOcCtpJU75nhw

Honeywell Tech Is Driving the UAM Revolution Hanneke Weitering May 24, 2023

It's been three years since Honeywell Aerospace took a leap into the advanced air mobility market with the launch of a new division dedicated entirely to uncrewed aerial systems (UAS) and urban air mobility (UAM). Since its inception, the new division has raked in more than $7 billion in contracts from aircraft manufacturers looking to incorporate Honeywell's technologies into their new products.

Honeywell will be supplying key components for a number of new aircraft, including eVTOL air taxis and cargo drones. For example, it will provide the actuation system and thermal management system for Archer Aviation's four-passenger Midnight eVTOL air taxi and the electric propulsion system for Lilium's seven-passenger Jet eVTOL aircraft.

Honeywell's Anthem integrated flight deck will be installed in several electric aircraft models, including the Lilium Jet, Vertical Aerospace's four-seat VX4 eVTOL air taxi, and the five-seat SA-1 eVTOL air taxi being developed by Supernal, Hyundai's UAM subsidiary. Electric aircraft developer Pipistrel, which was acquired by Textron last year, has chosen Honeywell's compact fly-by-wire system, attitude heading reference system, and air data modules for its Nuuva family of cargo UAVs.

While Honeywell is a supplier to these OEMs, the company's role in the nascent UAM industry goes far beyond simply providing aircraft components. The company is working closely with its customers to develop new technologies to meet their specific and unique needs. https://www.ainonline.com/aviation-news/business-aviation/2023-05-24/honeywell-tech-driving-uam-revolution

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US Congress to discuss new measures to make BVLOS operations more streamlined May 24, 2023 Philip Butterworth-Hayes

According to the *State Aviation Journal* and AUVSI, Congressman Rudy Yakym (IN-02) and Congressman Rob Menendez (NJ-08) have introduced the Increasing Competitiveness for American Drones Act.

"This comprehensive, bipartisan legislation is a much-needed step towards streamlining the approvals process for beyond visual line of sight (BVLOS) drone flights and bringing the regulation of drones in the United States up to speed with current technologies."

"Key provisions in this legislation include:

- Requiring the Federal Aviation Administration (FAA) to issue a notice of proposed rulemaking to enable commercial BVLOS operations.
- Establishing a new risk methodology that determines the regulatory scrutiny for pilot certification, airworthiness, and operating rules based on the size of the drone
- Establishing the Office of the Associate Administrator of UAS Integration at the FAA.

"Making sure the U.S. stays ahead of the curve on drones is essential to maintaining our competitive edge globally," said Congressman Yakym. "Unfortunately, our current regulatory environment is holding us back. By cutting red tape and streamlining the approval process for drone operations, we can preserve American leadership in aviation and unleash the potential for drones to be used for a whole host of innovative opportunities, from agriculture to infrastructure to delivery systems. https://www.unmannedairspace.info/uncategorized/us-congress-to-discuss-new-measures-to-make-bvlos-operations-more-streamlined/?mkt_tok=NzU2LUZXSi0wNjEAAAGL8w0gpg3E_0Zh5q4rIyZQhgWQjdG3EsZ8HJccBYTAOJiR1EvtM1S0LgBJ3UxE0kcISqzTl8MF8W-m48qz0W3y1lDI6SNJdI1tQtHF07M-1ngpVTc

Dronamics Cargo Drone Completes Inaugural Flight, with New Horizons for Delivery Services May 25, 2023 News

Dronamics, the world's first cargo drone airline, announced today the successful completion of the first flight of its flagship aircraft, the Black Swan, at Balchik airport in Bulgaria; demonstrating the potential for the logistics industry to enhance efficiency in the transportation of products.

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Born out of two brothers' desire to find a quicker, greener, and more affordable way to deliver goods, Dronamics is on a mission to enable same day delivery for everyone, everywhere. This significant milestone is the culmination of months of ground testing and subscale flights. The Black Swan aircraft was remotely piloted by two commercial airline pilots from the Dronamics ground control station.

The successful flight test validates the company's licensed cargo drone technology for commercial flights in Europe, set to begin later this year, serving industries such as e-commerce, pharma, spare parts, and perishables with a fast and cost-effective solution to meet evolving consumer needs. https://uasweekly.com/2023/05/25/dronamics-cargo-drone-successfully-completes-inaugural-flight-opening-new-horizons-for-delivery-services/

RigiTech Announces Partnership with Spright, Leading Drone Delivery Operator

May 25, 2023 News

RigiTech, growing provider of advanced drone delivery solutions, is proud to announce its partnership with Spright, the U.S.-based market-leading unmanned aerial system operator. This strategic alliance and commitment to deploy the Eiger delivery system further signals the reliability of RigiTech's technology.

Spright will become a key operating partner of RigiTech's systems in Europe and worldwide, playing a pivotal role in establishing new drone delivery networks for healthcare clients. RigiTech will be delivering the first six Eiger systems over the next few months and the training of Spright's key staff has already begun.

RigiTech's key to success has been a focus on building technology that can solve real challenges in healthcare logistics while providing a solution that exceeds ever-evolving aviation safety standards. The Eiger's unique independent safety systems and their deep integration with RigiTech's cloud-based control software have been instrumental in gaining flight permissions throughout Europe. RigiTech is now the only drone delivery company operating a daily commercial Beyond Visual Line of Sight route in Europe.
https://uasweekly.com/2023/05/25/rigitech-announces-partnership-with-spright-leading-drone-delivery-operator/?utm_source=rss&utm_medium=rss&utm_campaign=rigitech-announces-partnership-with-spright-leading-drone-delivery-operator&utm_term=2023-05-25

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Cash-tight Lilium fetes eVTOL deals with upper-crust AAM clients Bruce Crumley | May 25 2023

German advanced air mobility (AAM) plane developer Lilium has announced a pair of business developments that – while not eliminating the financial pinches the company has faced of late – offers new signs that its cutting-edge electric takeoff and landing (eVTOL) aircraft are finding eager buyers needed to assure the company's success.

This week Munich-based Lilium said it had signed a new deal for five of its eVTOLs with Swiss private jet and helicopter service provider Air-Dynamic SA, which plans to add the AAM craft to fleets it operates in several European countries. The following day Lilium revealed it had transformed an earlier memo of understanding covering six of its battery-powered aircraft with Benelux jet transport company ASL Group into a hard delivery accord – including an up-front deposit payment of an unspecified amount.

Those will be welcome developments for Lilium, whose rapid cash burn rate as it pushed development of its AAM planes and prepared for certification and launch of full-scale eVTOL production had brought it relatively close to running out of funds.

That dilemma led to the company's announcement earlier this month that it was raising a further $250 million to replenish its finances, though only $100 million of that has thus far been assured. https://dronedj.com/2023/05/25/cash-tight-lilium-fetes-evtol-deals-with-upper-crust-aam-clients/#more-93561

FAA Requests Feedback on 4 BVLOS Drone Operation Requests Naomi Cooper May 24, 2023

The Federal Aviation Administration is seeking feedback from industry on requests by four companies to fly unmanned aerial vehicles beyond visual line-of-sight.

Aerial data acquisition services provider Phoenix Air Unmanned, UAS technology developer uAvionix and

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autonomous delivery companies UPS Flight Forward and Zipline have sought permission to conduct BVLOS drone operations at or below 400 feet, the FAA said Tuesday.

The agency grants BVLOS waivers to public organizations looking to fly drones beyond a remote pilot's normal visual range.

Members of the public have 20 days to submit comments on the proposed waivers. The FAA will use the gathered information to inform its ongoing policy and rulemaking activities. https://executivegov.com/2023/05/faa-requests-feedback-on-4-bvlos-drone-operation-requests/

26May23

Drone Delivery Over the Hudson: NUAIR and NYNJ Port Authority Deliver Girl Scout Cookies

Miriam McNabb May 25, 2023 by DRONELIFE Staff Writer Ian M. Crosby

A year after launching a new Girl Scout badge to encourage and educate girls in STEM careers, the Port Authority of New York and New Jersey commemorated the partnership with the delivery of a box of Raspberry Rally cookies across the Hudson River, which served as the payload for the agency's first test of a small unmanned delivery aircraft. The box of cookies traveled 3 miles from Greenville Yards in Jersey City, N.J., to the New York New Jersey Rail's eastern terminus in Brooklyn, N.Y. in only 15 minutes, and the drone made the return trip in 10 minutes.

The delivery was made using an autonomous cargo drone in a pilot developed by Saleh Kojak, who manages the agency emergency management office's drone program. Kojak coordinated the test, securing support from aviation and port department staff and signoffs from the Federal Aviation Administration. The test flight was conducted by Northeast UAS Aerospace Integration Research (NUAIR), a New York-based non-profit with the goal of safely integrating unmanned aircraft systems into the national airspace. https://dronelife.com/2023/05/25/drone-delivery-over-the-hudson-river-nuair-and-nynj-port-authority-deliver-girl-scout-cookies-to-demonstrate/

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UAVOS and Bayanat Collaborate to Provide Autonomous Helicopters May 26, 2023

News

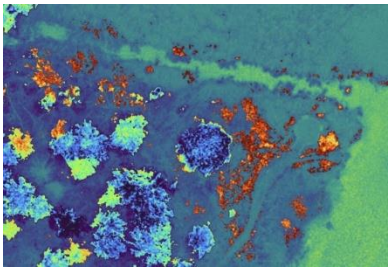
DAVOS Inc., a provider of unmanned systems and solutions, has been selected by Bayanat, a leading AI-powered geospatial solutions provider, to supply their state-of-the-art Unmanned Aircraft System (UAS) for a wide range of applications, including aerial photography and perimeter control. The UAS package comprises two UVH 25EL unmanned autonomous helicopters equipped with electric motors, a ground control station, and a variety of sensor payloads.

The UVH 25EL unmanned autonomous helicopter showcases exceptional capabilities, with an extended endurance of up to 1.5 hours and the ability to conduct precise mapping within a radius of 67 km. It excels even in challenging environmental conditions, with the ability to withstand winds of up to 14 m/s during take-off and landing, day or night. With a practical load weight capacity of 5 kg, the UVH 25EL ensures high performance and operational versatility, making it an ideal solution for applications such as coastal security, search and rescue operations, and advanced aerial photography missions.

The UVH 25EL is optimized for high-altitude flights. The UAS's autorotation capability serves as a vital safety feature, enabling controlled descent from heights in the event of an engine failure. Furthermore, the helicopter is equipped with a parachute recovery system, enhancing aviation safety to the maximum. https://uasweekly.com/2023/05/26/uavos-and-bayanat-collaborate-to-provide-autonomous-helicopters/?utm_source=rss&utm_medium=rss&utm_campaign=uavos-and-bayanat-collaborate-to-provide-autonomous-helicopters&utm_term=2023-05-26

27May23

New sensor for DJI drones can identify flowers, water vegetation Ishveena Singh | May 26 2023



AgEagle Aerial Systems has added a new product to the MicaSense series of drone sensors. The company's latest offering, RedEdge-P dual, is a high-resolution multispectral and RGB composite sensor that allows DJI operators to use their drones for plant classification, weed identification, environmental research and conservation, and vegetation

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analysis of water bodies.

Essentially, the new RedEdge-P dual is a blend of AgEagle's RedEdge-P and RedEdge-P blue cameras. Its coastal blue band – the first of its kind in the market – is specifically designed for vegetation analysis of water bodies. You can use this sensor for applications such as environmental monitoring, water management, habitat protection, and identification of vegetation species and weeds, as well as for differentiating and counting plants, trees, and invasive species.

Broadly, RedEdge-P dual covers 10 multispectral bands at 1.6 MP each. A global shutter shrouding all 10 lenses ensures that image quality is not degraded because of any vibration. But what's particularly interesting is that the sensor is purpose-built for mirroring Landsat 8 and Sentinel-2 satellite bands in just one drone flight, and that too at a higher resolution of 2cm/0.8 inch per pixel at 60 meters/200 feet.

The first advantage of such a system is that sharper imagery allows you to spot smaller problems sooner and make reliable decisions. Further, if you have already created vegetation indices using satellite imagery, you can now directly compare drone and satellite imagery to model trends and better predict yields in the future. https://dronedj.com/2023/05/26/dji-drone-sensor-water-vegetation/

29May23

YES, YOU CAN BUY YOUR OWN DELIVERY DRONE CAPABLE OF CARRYING 5 KGS May 15, 2023 Sally French

The RDSX Pelican uses a hybrid VTOL design that can handle up to 5 kg payloads on up to 40 km routes.

That said, it won't come cheap. It starts at $29,000, and only goes up from there depending on the configurations you go with. But it's a big leap for companies wanting to run their own delivery drone operations, but who don't have the resources to build their own, in-house drones.

To date, most of the major delivery drone service providers including Zipline, Flytrex and Google-sibling Wing use proprietary drones made in-house, therefore not available to the

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general public. They have robust engineering teams solving not just the problems around making drone deliveries (like logistics of delivering to customers' homes as well as dealing with local rules and other policies) but trying to build the drones themselves.

While A2Z likely can't solve the first half of those problems, it can solve the second half for you via its RDSX Pelican delivery drone. Here's what you need to know about this ready-made delivery drone, and how to get your hands on it:
https://www.thedronegirl.com/2023/05/29/rdsx-pelican-a2z/

Blended Wing Cargo Drone Gets Hydrogen Power Russ Niles May 29, 2023

Hydrogen-electric propulsion company ZeroAvia has teamed with Natilus, which has designed an autonomous blended wing body cargo plane that might offer some advantages in making a commercially viable aircraft. The spacious interior of the Kona has more room to store hydrogen than conventional designs and that might tip the balance in getting the range necessary to make a useable aircraft.

In a news release, Natilus CEO Aleksey Matyushev said the plane will carry up to 9,000 pounds of cargo and predicts transcontinental range. Natilus has done wind tunnel testing on scale prototype and ZeroAvia has a working engine that's been flown eight times on a 19-seat test aircraft. Based on that, Natilus is claiming $6.8 billion in orders and Zero Avia has contracts with Textron and Otto Aviation. "The Natilus-ZeroAvia partnership goes further, bringing the talents and innovations of the two companies together to deliver much needed innovation in the air cargo delivery industry and multiple solutions for our customers," Matyushev said.
https://www.avweb.com/aviation-news/blended-wing-cargo-drone-gets-hydrogen-power/?MailingID=1365

30May23

Ukraine is betting on drones to strike deep into Russia Mar 20th 2023

On february 28th the skies above Russia buzzed with the sound of hostile drones. St Petersburg, the country's second city, imposed a 200km no-fly zone around its airports. In Krasnodar in the south, an oil depot went up in flames. Drones reached Belgorod and Bryansk regions, which share a

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border with Ukraine. One even came close to Moscow—downed after reportedly clipping trees less than 100km from the capital. The incursion was not the first time that Ukrainian unmanned aerial vehicles had found a way past Russian defenses, but it was the first concerted attack of its kind. It had many Ukrainians wondering if they had found a key to overturning Russia's long-range strike advantage—even in the absence of long-range Western munitions which may never come.

Ukraine is deploying drones in at least five different ways: as small, commercially available reconnaissance vehicles that can feed video footage back over a short range; as small-scale improvised loitering munitions, often designed to disturb more than destroy; as more sophisticated reconnaissance or electronic-warfare drones; as larger loitering munitions designed to destroy heavy armor; and finally as strike drones, whether airborne or naval, able to deliver bombs and missiles over distances of hundreds or even thousands of kilometers. https://www.economist.com/europe/2023/03/20/ukraine-is-betting-on-drones-to-strike-deep-into-russia?gclid=CjwKCAjwvdajBhBEEiwAeMh1U6gsvz5q-_kklDvI1L3ZtA04bANdaClRsMzEh4dSCP1cwnATQf176hoCJRsQAvD_BwE&gclsrc=aw.ds?utm_medium=email.internal-newsletter.np&utm_source=salesforce-marketing-cloud&utm_campaign=espresso.US&utm_content=the-world-in-brief-may-30th-2023&utm_term=05/30/23

Drone-Based Micro-Weather Service Launched Sarah Simpson / 25 May 2023

Meteomatics has launched its first U.S. Meteodrone at GrandSKY aviation park at Grand Forks Air Force Base in North Dakota.

According to Meteomatics, the autonomous flight system is the nation's first drone-based micro-weather service, able to fly up to 20,000 feet. This enables it to close the meteorological data gap in the lower and mid atmosphere–regions that are not regularly or accurately observed by traditional weather sensing technology and radar.

Visibility at this level is critical for predictability and reliability in aviation, as well as business forecasting across industries. Meteomatics is working in partnership with commercial UAS aviation park GrandSKY, and TruWeather Solutions, which specializes in low altitude weather technology and data, to produce the nation's first state-wide micro weather service in North Dakota. https://www.unmannedsystemstechnology.com/2023/05/drone-based-micro-weather-service-launched/?utm_source=UST+eBrief&utm_campaign=55e21c2006-ust-ebrief_2023-05-

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Ann Arbor company that uses drones to detect methane leaks closes $2 million seed funding RYLEE BARNSDALE | WEDNESDAY, MAY 24, 2023

Sniffer Robotics was founded in 2016. The company's patented "SnifferDRONE" provides an alternative for field technicians who would manually identify and measure methane emissions, which can be a time-consuming and sometimes dangerous process. To date, Sniffer Robotics has completed projects in 28 states, identifying over 16,000 methane leak sources across over 150 sites.

Sniffer Robotics has deployed its technology in landfills to reduce production of the greenhouse gas methane, but has recently expanded its services into the natural gas and biomass industries, such as wood and wood waste. However, Mohr says, "anyone who needs to monitor methane emissions on land-based applications" could utilize the SnifferDRONE and Sniffer Robotics' services, such as aerial imaging.
The funding round was led by the Michigan Angel Fund established by Ann Arbor SPARK and the Michigan Economic Development Corporation.
https://www.secondwavemedia.com/concentrate/innovationnews/sniffer0683.aspx

Drones hit Moscow, shocking Russian capital after new missile attack on Kyiv Isobel Koshiw, Samantha Schmidt, and Francesca Ebel May 30, 2023

KYIV, Ukraine — A drone attack hit Moscow on Tuesday morning, damaging two residential buildings — the first strike on a civilian area of the Russian capital since President Vladimir Putin launched an invasion of Ukraine more than a year ago. It was almost certainly a prelude to a major escalation in hostilities.

The drone attack, which was confirmed by Mayor Sergei Sobyanin, occurred just hours after yet another barrage of Russian airstrikes on Kyiv, the Ukrainian capital, which killed at least one person and injured more than a dozen. In Moscow, there were no reports of serious injuries.

Kyiv has been under a relentless assault of near-nightly bombings in recent weeks, with Moscow seemingly intent on weakening or destroying Ukraine's air defenses ahead of a much-anticipated counteroffensive that President Volodymyr Zelensky has said will oust the Russian invaders from all of Ukraine's territory.

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Air defenses in Kyiv, Ukraine, intercepted a Shahed drone midair on Tuesday during the third Russian aerial attack on the Ukrainian capital in the past 24 hours. (Evgeniy Maloletka/AP)

While Ukraine denied involvement in the drone attack on Moscow, the dueling strikes on the capital cities appeared to mark a threshold moment, as residents of Russia's capital experienced direct consequences of their nation's hostilities for the first time.

Reports that some 200 artillery shells hit Russian towns in the Belgorod region near the Ukrainian border Tuesday offered further evidence that Kyiv wants to bring the war to Russian territory before initiating its long-expected counteroffensive, which will inevitably necessitate further destruction in Ukraine. https://www.washingtonpost.com/world/2023/05/30/moscow-drones-kyiv-russia-counteroffensive/?utm_campaign=wp_post_most&utm_medium=email&utm_source=newsletter&wpisrc=nl_most&carta-url=https%3A%2F%2Fs2.washingtonpost.com%2Fcar-ln-tr%2F3a283cf%2F64761e9149fef7411dfab0b3%2F597338d3ade4e21a848c5017%2F10%2F70%2F64761e9149fef7411dfab0b3

Volocopter Partners with Swiss-AS to Integrate AMOS Software into its Ecosystem May 30, 2023 News

Swiss Aviation Software and Volocopter today cosigned a landmark multi-year contract for AMOS, Swiss-AS's maintenance, repair, and overhau) software. AMOS will be used to manage Volocopter's electric vertical takeoff and landing aircraft fleet worldwide.

Seamless software integration will ensure continued fleet airworthiness, offer aircraft reliability monitoring and analysis, and act as an interface to Volocopter's proprietary digital operating system. This is the first time Swiss-AS is collaborating in an urban air mobility setting, a key development as Volocopter prepares for entry into service in 2024.

As the UAM industry pioneer, Volocopter is set to receive type certification in 2024 for its VoloCity, a 2-seater electric air taxi built for city use. The company will be the first to launch

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commercial services in Europe that meet the same very high safety standards commercial airliners must satisfy.

AMOS excels at managing vehicle configuration traceability throughout its life cycle. Such aspects include component design/purchase dates, installation/replacement dates, and total operating hours. AMOS will also monitor ground handling operations, deploy the relevant tools, and manage ground staff assignments. Further, artificial intelligence (AI) will enable reliability monitoring. https://uasweekly.com/2023/05/30/volocopter-partners-with-swiss-as-to-integrate-amos-software-into-its-ecosystem/?utm_source=rss&utm_medium=rss&utm_campaign=volocopter-partners-with-swiss-as-to-integrate-amos-software-into-its-ecosystem&utm_term=2023-05-30

Parallel Flight Tech accelerates international scaling of its heavy-lift drone activities Bruce Crumley | May 30 2023

California heavy-lift drone specialist Parallel Flight Technologies (PFT) is moving to accelerate the growth of its business activities around the world through a pair of developments, including a purchase agreement for 50 of its flagship Firefly craft with Indian company UAV Systems Private Limited. The value of the transaction was not revealed, but a communiqué from the Santa Cruz, California-area company termed it a "multimillion dollar" transaction.

In an era where even smaller-scale aerial craft purchases are often first framed in potentially fudgeable memoranda of understanding terms, the PFT accord with UAV Systems Private is notable in including up-front deposit payments for the 50 Firefly heavy-lift drones. Delivery of those is expected to begin sometime next year.

PFT describes UAV Systems Private as being backed by a "diversified group of major Indian conglomerates, spanning auto, (electric vehicles), battery manufacturing, fortified fencing, and hospitality" activities. That will not only provide it a wide range of applications to prove Firefly's heavy-lift and extended flight capacities with Indian end-users, but also add further momentum for PFT's continued US and international scaling. https://dronedj.com/2023/05/30/parallel-flight-tech-accelerates-international-scaling-of-its-heavy-lift-drone-activities/#more-93641

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Saving Norway's Forests: Biodrone Deploys M300 RTK and AI to Elevate Forestry Efficiency By Biodrone May 30, 2023

In the winter of 2021-2022, Norway experienced several extreme weather events that wreaked havoc on the country's forests. These storms resulted in power outages for thousands of homes and in the destruction of up to 2.8 million cubic meters of forest. Over 15,000 hectares of trees were downed, resulting in the greatest destruction of Norway's forests in modern recorded history.

The downed trees represented not only a significant economic loss of harvestable lumber - 2.8 million cubic meters refers to the total volume of usable wood downed - but also, a threat to the long-term health of the forest. Downed trees left to dry and rot would result in breeding grounds for bark beetles and an increased risk of forest fires, drought damage, and other issues that would damage the value of the forests.

Biodrone, a Norway-based drone services provider, was approached by Allskog, a Trondehim-based branch of the Norwegian Forest Owners Association, and Skogbrand, a forest insurance agency in Oslo, to map these damaged areas using drone technology.

The company used a Matrice 300 RTK drone combined with photogrammetry and AI to give their clients precise maps of the damaged areas, including the position and amount of timber. https://enterprise-insights.dji.com/user-stories/biodrone-ai-forestry-in-norway?utm_campaign=Aerial%20Insights&utm_medium=email&_hsmi=260508094&_hsenc=p2ANqtz-9M-VjSrPsdZ9itWrTsQY1LnUNWB5Id-LM2cRVePS1rlDwVF5Sh8tZspGHZ2rE9tF8WRQIz17SXg0RB6ma_GvAC7i-QoQ&utm_content=260507713&utm_source=hs_email

Puma 3 Goes VTOL, Shrinks Footprint ABE PECK MAY 26, 2023AIR, MILITARY

AeroVironment has expanded the capabilities of its successful Puma SUAS with the introduction of a VTOL kit. This enhancement to the 3 AE (all environment) model allows for a shift from fixed-wing to VTOL in minutes, expanding operational capabilities in urban and/or GPS-denied navigation in contested spaces.

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"Puma VTOL is a new capability into our Puma family that allows launch and recovery with a small footprint," Scott Newbern, AeroVironment's vice president and chief technology officer, told Inside Unmanned Systems during our livestreaming at XPONENTIAL 2023. Instead of a 100-meter clearing for the standard model, the VTOL version can reduce the needed space to 16 meters. "It's really about that expeditionary operation in a smaller footprint," Newbern said.

The VTOL package consists of boom assemblies, a pre-wired center wing avionics module and fastening hardware, with one-time installation. "It's a modular kit," Newbern said. "If you need to do vertical takeoff, you put the booms on. If you want to do traditional Puma operation, it's just like always." https://insideunmannedsystems.com/puma-3-goes-vtol-shrinks-footprint/

Schiebel's CAMCOPTER® S-100 Enables Ship Emissions Monitoring for EMSA in the North Sea May 31, 2023 News

Schiebel, in collaboration with the European Maritime Safety Agency (EMSA), is at the forefront of ship emission monitoring by providing its advanced CAMCOPTER® S-100 Unmanned Air System (UAS) to the German Federal Police and Federal Maritime and Hydrographic Agency. Operating from the patrol vessel "Bamberg", the CAMCOPTER® S-100 is deployed day and night to monitor commercial ship emissions within the German Exclusive Economic Zone in the North Sea. Additionally, the UAS supports various maritime surveillance tasks, including vessel traffic monitoring, maritime law enforcement patrols in German territorial waters, environmental protection, and providing support for Search and Rescue missions when needed.

The S-100 UAS plays a critical role in measuring ships' Sulphur emissions in busy shipping lanes, ensuring compliance with the EU regulations on the Sulphur content of marine fuels in real time. Measurements captured by the UAS are transmitted during flight to the EMSA RPAS Data Centre and subsequently shared with the relevant authorities.
https://uasweekly.com/2023/05/31/schiebels-camcopter-s-100-enables-ship-emissions-monitoring-for-emsa-in-the-north-sea/?utm_source=rss&utm_medium=rss&utm_campaign=schiebels-camcopter-s-100-enables-ship-emissions-monitoring-for-emsa-in-the-north-sea&utm_term=2023-05-31

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Legacy cargo airline Ameriflight to launch drone delivery network with Matternet Bruce Crumley | May 31 2023

Top US cargo carrier Ameriflight has received approval from the Federal Aviation Administration (FAA) to operate drone deliveries as part of its regular services, and will soon begin using California-based UAV developer Matternet's M2 craft and navigating systems to launch that activity.

Ameriflight, which calls itself the largest Part 135 cargo airline in the US, says its FAA exemption to add Matternet UAVs to its operation makes it the first legacy freight carrier permitted to add drone deliveries parallel to its freight transportation using traditional aircraft.

The Dallas-based company said it plans on using broad flight and production approvals Matternet's M2 has received from regulators to prepare the launch of the first fully functioning large-scale drone operation in the US. In doing so it will look to provide commercial delivery for health care and e-commerce clients to their customers in dense urban and suburban environments across the country.

In building up to that, Ameriflight initially plans on transporting medical samples and small batch pharmaceuticals for partnering companies. The new services will use M2 UAVs and operating tech from a remote network operations center.
https://dronedj.com/2023/05/31/legacy-cargo-airline-ameriflight-to-launch-drone-delivery-network-with-matternet/#more-93675

New York: 18 drones to monitor sharks near Long Island beaches Ishveena Singh | May 31 2023

New York State has announced additional measures to protect beachgoers from sharks at Long Island State Park beaches this summer. More specifically, 10 new drones are being deployed to enhance the State's shark monitoring capacity.

Since there was an increase in shark sightings last summer, the New York State Office of Parks, Recreation and Historic Preservation, the Department of Environmental Conservation, and the New York State Police have decided to increase surveillance along Long Island beaches. And drones are set to play a major role in their

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shark monitoring efforts. While eight State Parks drones are already in operation, 10 more aircraft are being deployed along the South Shore of Long Island to give officials additional eyes in the sky.

One of these drones, which is being assigned to Park Police, is a particularly advanced model. It's a large enterprise drone with thermal imaging, laser range finding, and high-quality cameras to allow for night-time surveillance and patrols in adverse weather conditions. This drone can also drop personal flotation devices in emergency situations.
https://dronedj.com/2023/05/31/new-york-beach-shark-drone/

1Jun23

UKRAINIAN FORCES TO RECEIVE HUNDREDS OF DRONES THIS MONTH May 26, 2023 Sally French

Puerto Rico-based military drone and technology giant Red Cat is set to fulfill a purchase order this month consisting of 200 long-range, high-speed FPV (first-person view) drones to Ukrainian drone pilots engaged in conflict with Russia.

The drones have what Red Cat claims to be the highest power-to-weight ratio in the drone industry, offering increased maneuverability, especially when combined with the FPV functionality of the drones. The company also says its FPV drones can fly in GPS-denied and GPS-jammed battlefield conditions.

Red Cat is the company behind drones including the Teal 2, produced by Utah-based Teal (Teal is owned by Red Cat). Red Cat just last month officially launched its military-grade Teal 2 sUAS for public availability. The Teal 2 drone's key differentiator is nighttime operations, a feature that's especially crucial for military operations.
https://www.thedronegirl.com/2023/06/01/ukrainian-forces-teal-2-drones/

Ameriflight Granted Approval to Offer Matternet's Drone Delivery Service in US

DRONELIFE Staff Writer Ian M. Crosby Posted By: Miriam McNabb May 31, 2023

Drone delivery system developer Matternet has announced that its partner Ameriflight has received FAA approval to operate the Matternet M2 for commercial delivery. Together, Matternet and Ameriflight will be the country's first fully operational large-scale drone airline, with a focus on health care and e-commerce deliveries.

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This development comes after the FAA's approval of Matternet's M2 aircraft for operations under Ameriflight's Part 135 certificate, as well as Matternet's receival of FAA Type and Production certifications for the M2 last year. The M2 is the first unmanned aircraft to receive such certifications. Designed for large scale operation, a recent FAA waiver enabled the operation of up to 20 M2 drones by a single pilot at Matternet's California test facility. These capabilities let Matternet scale its drone delivery services and provide its technology to additional customers. https://dronelife.com/2023/05/31/the-first-fully-operational-large-scale-drone-airline-in-the-us-ameriflight-gets-faa-approval-for-matternet-m2-commercial-delivery/

Commercial Drone Alliance and Commercial UAV Expo Announce Elevated Partnership Commercial UAV News Staff MAY 31, 2023

This week, Commercial UAV Expo announced Commercial Drone Alliance (CDA) as its Official Association Partner. In a reciprocal move, CDA announced Commercial UAV Expo as its Official Trade Show Partner.

"Commercial Drone Alliance has been a leading advocate and educator in the commercial drone space and an important partner for Commercial UAV Expo for many years. It's exciting to recognize their importance to the event by naming them the Official Association Partner," said Lee Corkhill, Group Event Director at Diversified Communications, organizer of the event. "CDA supports Commercial UAV Expo through its active participation on the Advisory Board and by partnering on the development of the Conference Program and speaker line-up, ensuring relevant and timely education in an ever-changing industry."

Commercial UAV Expo is the leading international commercial drone trade show and conference, focusing on the integration and operation of commercial UAS in select vertical markets, including construction, drone delivery, energy & utilities, forestry & agriculture, infrastructure & transportation, mining & aggregates, public safety & emergency services, security, and surveying & mapping. Launched in 2015, the next edition will take place September 5-7, 2023, at Caesars Forum in Las Vegas.
https://www.commercialuavnews.com/regulations/commercial-drone-alliance-and-commercial-uav-expo-announce-elevated-partnership?mkt_tok=NzU2LUZXSi0wNjEAAAGMFyS09YhOzzShDe8vx3pA6lA5HV7KDwW5k2KYfjmAwAJcVhTeyXZ2SfxLmomMjztixOv3W3BQBR7YVfJnF1Jd5wuVuYnQCY3Saw1ykDIzezsXyQ

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Double Box Tail Drone for Stability and Control: DBT Aero Flies 3D Printed Swyft [VIDEO]

Miriam McNabb June 01, 2023 by DRONELIFE Staff Writer Ian M. Crosby

Emerging aircraft leader DBT Aero has demonstrated its Double Box Tail (DBT) technology through the successful test flight of a 3D printed Group 1 UAS. This is the company's third successful subscale demonstrator of their manned prototype, having previously designed and test flown Group 2 and Group 3 scale UAS.

The Group 1 aircraft was developed alongside 3DAeroventures, with the sponsorship of HiTEC, House of Balsa and ZAP Adhesives. It first took flight on September 11, 2022 at the El Paso Radio Controller's Field.

The company's Double Box Tail configuration provides increased stability and control, resulting in a smoother flight and more accurate data acquisition. The aircraft's swept wing design is suited to both high speed and slow flight, lowering travel and delivery times and expediting data acquisition.

The combination of aerodynamics with system optimization promises to enable affordable, rapid, and silent flight for Regional Air Mobility of passengers and cargo in addition to BVLOS UAS missions. DBT Aero's technology is made to provide the lowest cost per seat-mile or cost per ton-mile at rapid speeds while maintaining carbon neutral to carbon free status. This technology holds the potential to create new markets and improve existing ones, offering an alternative to traditional transportation modes and UAS missions.
https://dronelife.com/2023/06/01/double-box-tail-drone-for-stability-and-control-dbt-aero-flies-3d-printed-swyft/

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