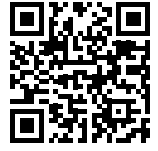


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DRONES

WORLD

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Mr. Teppei Seki
Director - Terra Drone
PG 14



Mr. Jia Xu
CEO - SKYGRID

PG 24

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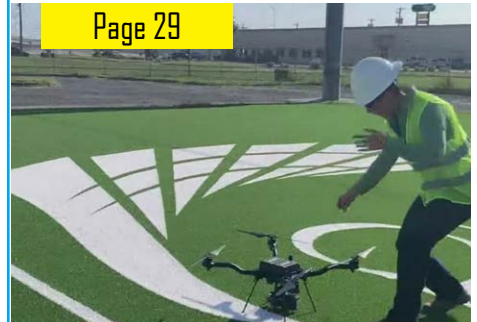


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DRONES WORLD is published by - B. Kartikeya



B. KARTIKEYA

Worldwide, commercial drone usage is taking place. Drones may be used for various tasks, such as delivering vaccinations and medications to remote parts of the nation or taking aerial photos for weddings, movies, or journalism. Investments in drone technology are soaring because research predicts their rapid expansion. At the moment, the drone sector is increasingly browsing our publication. Let's stay up to speed on the drone sector.

Get the most recent information on the drone market with our November edition. The magazine's many sections will reveal that manufacturers are now making drones that can be used for business reasons due to the growing use of drones in military activities.

Emergency communications centres may transform Raw Z-axis position data into dispatchable locations with the help of GeoComm and RapidSOS, as explained in the GIS part of the magazine. The successful acquisition of a Type Certificate for the EH216-S passenger-carrying UAV system by EHANG from CAAC is demonstrated in the eVTOL section.

Check out the exclusive interviews with the most prominent figures in the drone business. Mr. Teppei Seki, director of Terra Drone, is the subject of the initial consultation. If young people or companies want to go into the drone industry, he is offering advice. The upcoming interview will be with Mr. Jia Xu, CEO of SKYGRID. Highlighting significant turning points in the development of the business, he discusses the history of SkyGrid from its founding to the present.

Indeed, there has been much disruption in publishing and drones. Drones World's commitment to being your go-to source for news, commentary, and understanding about this rapidly developing field of drone electronics won't change, though. We will still be your first choice for news and information on drones, whether through our well-known print newspaper or our growing array of online offerings.

Kartikeya B.



TEXTRON, HOWE & HOWE AND TELEDYNE FLIR SELECTED FOR NEXT PHASE OF US ARMY RCV PROGRAM

Textron Systems Corporation announced that Team RIPS AW - Textron Systems, Howe & Howe and Teledyne FLIR Defense has been down selected to participate in the U.S. Army's Robotic Combat Vehicle (RCV) Phase I: Platform Prototype program, an anticipated Army Program of Record (PoR). Team RIPS AW submitted a response to this competitive prototype project solicitation, which was released to members of the National Advanced Mobility Consortium (NAMC).

Under Phase 1, the company will deliver two RIPS AW® M3 prototype vehicles in 2024. Upon delivery, the U.S. Army will begin comprehensive testing against published system requirements related to mobility, sensor performance, remote vehicle control and overall systems reliability. In parallel to building and delivering vehicles, Team RIPS AW will complete the preliminary design for the M3 variant.

The RIPS AW M3 is a rugged and reliable RCV platform, leveraging Textron Systems' nearly four decades of cross-domain uncrewed product design, integration, manufacturing, and fielding experience. Designed to meet stated Army requirements while keeping a focus on transportability and mission versatility, the vehicle is ready to meet the challenges of an ever changing battlefield. It features an open architecture design and common chassis which supports a wide variety of field exchangeable payloads from a basic flat-top

deck configuration.

Team RIPS AW has invested in this family of robotic vehicles since 2019 when the RIPS AW M5 system first debuted. Later variants, including the M5-E (electric) and M3 Tech Demonstrator, leveraged the team's collaboration with industry partners, academia and the U.S. Army to perform multiple mission sets in various environmental and test conditions. Since 2019, the RIPS AW family of vehicles have amassed over 2,000 miles of durability testing.



The technology behind the family of RIPS AW vehicles demonstrates the innovative approach and experience Howe & Howe has in ground robotic vehicles," said Senior Vice President Mike Howe. "We've developed multiple vehicles, all with the same robotic core, so they're mission-ready and adaptable as needed."



"Team RIPS AW combines the specialties of Textron Systems, Howe & Howe and Teledyne FLIR Defense, creating a mission-ready system to support the Army's needs," said Senior Vice President Land Systems and Sea Systems David Phillips. "Building on our proven cross-domain capabilities and experience, the vehicle has evolved and adapted based on customer feedback, leading us to the RIPS AW M3 of today."

"We're proud to be partnered with Textron Systems and Howe & Howe to deliver this unprecedented robotic platform to the U.S. Army," said Dr. JihFen Lei, Executive Vice President and General Manager of Teledyne FLIR Defense. "We're excited to bring our expertise in providing tethered uncrewed aerial systems, 360-degree situational awareness, and other intelligent sensing technology onto the RIPS AW M3 that will give our soldiers a decisive tactical edge and allow commanders to make better, faster decisions."

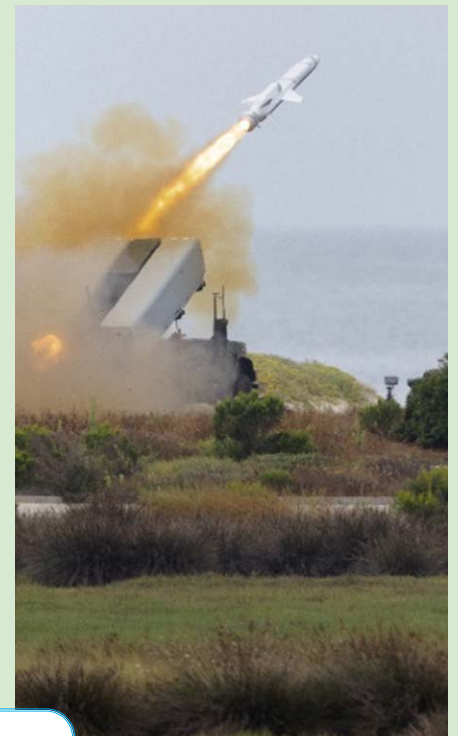
OSHKOSH DEFENSE RECEIVES ORDER FOR ADDITIONAL ROGUE FIRES

Oshkosh Defense, LLC, an Oshkosh Corporation company, announced that the Marine Corps Systems Command has placed a \$39.5 million order for additional Remotely Operated Ground Unit for Expeditionary Fires (ROGUE-Fires) carriers and associated kits.

Based on the Oshkosh Defense Joint Light Tactical Vehicle (JLTV), ROGUE Fires is an unmanned ground vehicle (UGV) that leverages the JLTV's extreme off-road mobility, payload capacity and Oshkosh's advanced autonomous vehicle technologies to support Ground-Based Anti-Ship Missile (GBASM) operations. The unmanned technology associated with ROGUE Fires allows the vehicle to operate in teleoperator or leader-follower mode.

"Oshkosh Defense is committed to providing mission-critical capabilities and innovation to support the U.S. Marine Corps and their modernization plans," said Pat Williams, chief programs officer for Oshkosh Defense. "The adaptable design of ROGUE Fires leverages next-generation technologies and allows for integration of scalable weapon system payloads to meet mission requirements."

In August 2023, Oshkosh Defense delivered six initial Production Representative Models (PRMs) in support of the Marine Corps' modernizations plans of Force Design 2030.



US Army Awards Near Earth Autonomy and Kaman Air Vehicles Contract to Demo Heavy Lift VTOL Capability

Near Earth Autonomy, Inc. (Near Earth) and Kaman Air Vehicles, a division of Kaman Corporation, announced that they have been awarded a contract by the U.S. Army to demonstrate a resupply uncrewed aerial system (UAS) capable of moving loads with a minimum of 800 pounds and flying distances over 100 miles. This heavy-lift vertical takeoff and landing (VTOL) UAS will take Soldiers out of harm's way and supplement resupply trips through added uncrewed lift capacity.

Today, the Army depends on smaller drones and heavier crewed aircraft for resupply missions. This practice significantly heightens the risk for Army aircrews, especially when operating in hostile regions. The Army's heavy-lift Vertical Takeoff and Landing (VTOL) UAS program requirements match Near Earth's expertise in autonomous flight technology and Kaman's proven rotorcraft and uncrewed solutions capabilities. The joint effort aligns with Near Earth and Kaman's shared commitment to advancing the capabilities of military UAS and the ongoing modernization of military logistics operations.

Near Earth is the prime contractor and is responsible for the autonomy system which will provide mission assurance through responsive autonomy, enabling Soldiers to focus on their primary mission rather than on controlling the UAS. The autonomy features include navigation, obstacle detection, and manual override systems. Essential components are designed to fail safely and function even if other parts



of the system malfunction.

The UAS will be based on Kaman's KARGO UAV, a purpose-built autonomous Vertical Takeoff and Landing (VTOL) aircraft that will meet the needs of the Army in both lift capacity and endurance while ensuring mission success even in contested environments. Built with the U.S. Armed Forces future operating concepts in mind, the KARGO UAV offers a rugged design for easy transport and is capable of carrying up to 800 pounds of payload.

The UAS is designed for different missions by utilizing a common attachment system that will streamline configuration. This modularity supports Resupply/Contested Logistics, Intelligence, Surveillance, and Reconnaissance (ISR), Electronic Warfare (EW), Communications Relay (CR), and Search and Rescue (SAR).

"The HVTOL UAS program partnership with Kaman enables us to broaden our current scope from developing an aerial resupply aircraft for the Marine

Corps to creating an autonomous multi-mission aircraft that can autonomously address a wide variety of critical needs," said Sanjiv Singh, CEO at Near Earth Autonomy.

Romin Dasmalchi, General Manager for the Kaman KARGO UAV business, stated, "Between Near Earth's expertise in aerial autonomy and Kaman's background in uncrewed logistics and rotorcraft manufacturing, we have the synergistic skills needed to develop a single aerial system that serves many different applications."

In 2022, the United States Marine Corps (USMC) selected the KARGO UAV for the Medium Unmanned Logistics Systems - Air (MULS-A) program managed by Naval Air Systems Command (NAVAIR) PMA-263. The Army's partnership enables further development for broader use, including scaling the original KARGO UAV design for larger payloads. The partners will demonstrate the KARGO UAV's capabilities at Project Convergence 2024, displaying applications ranging from cargo resupply to reconnaissance.

Curtiss-Wright Awarded \$34M Contract to Provide Airborne Data Recorder Technology to the US Navy

Curtiss-Wright Corporation announced that it has been awarded a five-year, \$34 million firm-fixed-price indefinite delivery, indefinite quantity (IDIQ) contract by the Naval Surface Warfare Center (NSWC) to provide Modular Open Systems Approach (MOSA) based airborne data recorder technology for use on U.S. and Australian manned and unmanned maritime aircraft.

Under the agreement, Curtiss-Wright will provide and service Keyed Broad Area Maritime Surveillance Airborne Recorder (K-BAR) Network Attached Storage (NAS) solutions including chassis, docking stations, removable storage



modules and lab cable sets.

"We are pleased to have been selected by the Naval Surface Warfare Center to provide our rugged airborne network attached storage technology and support services for Naval manned and unmanned aircraft programs," said Lynn M. Bamford, Chair and CEO of Curtiss-Wright Corporation. "This award reflects our commitment

to provide the most advanced and reliable open architecture data storage systems in support of our warfighters."

As a leading supplier of MOSA based encrypted, solid-state network-attached storage subsystems, Curtiss-Wright is providing the NSWC with commercial-off-the shelf (COTS) open architecture K-BAR NAS equipment supporting MQ-4C Triton and future PMA-290 aircraft. The sole source contract provides training and engineering services support to the K-BAR equipment.

Curtiss-Wright is performing the work within its Defense Solutions division in the Defense Electronics segment.



Defence to Deploy MQ-9 Reapers to Protect NATO's Eastern Flank

Netherlands Minister of Defence Kajsa Ollongren informed the House of Representatives in writing that next year, the Netherlands will station three MQ-9 Reaper drones in Romania to contribute to the defence of NATO's eastern flank. The unarmed aircraft will be used to gather intelligence along the eastern border of Alliance territory. It will be the first time that the Netherlands deploys the unmanned reconnaissance aircraft outside its own territory.

The MQ-9s will assist in air shielding operations. The purposes of these operations include monitoring the situation at the border of Alliance territory. The unmanned aircraft will use their sensors to gather data and information in order to build and maintain an accurate picture of the situation. This will prevent possible misunderstandings and any escalations that could ensue.

While NATO will specify the intelligence that it needs, the Netherlands will determine how it is gathered. The processing of intelligence will also remain a national responsibility.

Allied operations
In addition to protecting NATO territory, Defence will gain experience in Allied operations as a result of the MQ-9 deployment, which will last for at least six months and twelve months at most.

The total detachment will consist of 135 Defence employees. Around 40 service members will maintain the aircraft at the air base near Campia Turzii in Romania. The rest of the detachment will work at Leeuwarden Air Base. Their duties will include operating the MQ-9s and processing the intelligence gathered.

A team of army engineers will build the camp for their air force colleagues at the Romanian air base.

American Rheinmetall Unveils Best-in-class 30mm Cannon on RCV to Demo Mobile C-UAS Excellence

Rheinmetall, a leader in advanced defense technologies and solutions, is taking the mobile counter-UAS fight to the next level at this year's Association of the United States Army (AUSA) Annual Meeting. Rheinmetall is showcasing the exceptionally lethal, precise and versatile Skyranger 30, the world's most advanced c-UAS turret, with the combined speed, mobility, and unmanned capability of Textron Systems' Ripsaw M5 robotic combat vehicle (RCV). When integrated on an unmanned ground vehicle, Skyranger can secure the air space and mitigate UAS threats in the most austere and contested battle spaces, including autonomously at the tactical edge. Visitors to AUSA can see the Skyranger displayed on Textron's M5, on Rheinmetall's booth (#1603).

The use of best-in-class cannon systems means that Skyranger can stand its ground against swarming attacks. Together with Textron's M5, Skyranger can be deployed alongside ground forces or used for stationary vital-asset protection. The Skyranger can protect mobile units on the march or critical fixed infrastructure and facilities from loiter, pop-up and dive attacks. The Skyranger 30 variant represents a significant leap-ahead in c-UAS technology by coupling 360° air and ground surveillance with an autonomous 30mm Oerlikon Revolver Gun®, Oerlikon AHEAD® airburst ammunition and short-range air defense missiles. The 30mm revolver gun provides ultimate firepower and precision at 1,250 rds/min, and when combined with the dynamically programmed airburst ammunition, enhances the probability of hitting even the smallest micro and nano drones.

Skyranger can independently generate its own local air picture while its open architecture C2 system (Skymaster), IFF and data link can be seamlessly integrated into higher echelon systems such as FAADC2. As the threats evolve, so will the Skyranger. Also available as a 35mm variant, the Skyranger family offers the most modern mobile defense against an array of current and future battlefield air threats.



NEW GLOBAL SURVEILLANCE AIRCRAFT BEGINS UK TRIALS

The first of 16 remotely piloted Protector Aircraft has arrived at RAF Waddington in Lincolnshire to commence a series of rigorous trials and tests before entering the RAF fleet.

Equipped with a suite of surveillance equipment, the Protector aircraft will bring a critical global surveillance capability for the UK, all while being remotely piloted from RAF Waddington. It will be able to undertake a wide range of tasking including land and maritime surveillance to track threats, counter terrorism and support to UK civil authorities, such as assisting HM Coastguard with search and rescue missions.

With a wingspan of 79 feet, the uncrewed aircraft can operate at heights up to 40,000 feet and has an endurance of more than 30 hours, enabling unparalleled surveillance and strike capability.

The aircraft has been assembled by a newly reformed 31 Squadron who are preparing it for ground and air testing ahead of its anticipated in-service date later next year. 31 Sqn, which previously operated the Tornado GR4, will operate and maintain the aircraft at RAF Waddington. The squadron has a long history stretching back to 1915 and have operated multiple aircraft types in the last century. They are exclusively a Protector Sqn now and have been reformed to operate Protector as it enters Service.

Defence Procurement Minister, James Cartlidge MP said: "The UK's world-class Protector aircraft will emphasise our ultra-modern surveillance, intelligence, and precision strike capabilities, ensuring we are ready to monitor and protect against potential adversaries around the globe.

"With the first aircraft at RAF Waddington ready to begin trials, we will once again demonstrate how we are spearheading military defence technology."

The first phase of tests, beginning this week, will involve ground testing of the satellite links and taxi procedures, as well as take-off and landing trials. This will also incorporate a circuit above RAF Waddington.

In addition to accepting the Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) roles currently undertaken by Reaper, which has provided exceptional service on operations



around the clock for more than 15 years, Protector will be certified to stringent NATO safety and certification standards allowing it to operate in the UK and European civilian airspace.

Senior Responsible Owner, Protector Programme Air Commodore Alex Hicks, said: "The arrival of the UK's first Protector to the Royal Air Force is the culmination of years of work by many personnel across the whole of the MOD. The ISR Capability Team will be working with 56 Sqn, our test and evaluation experts, who will put the aircraft through its paces to ensure it is ready for operational service next year, whilst the newly reformed 31 Sqn will focus on preparing to operate the aircraft in service. This is an important milestone for the Programme, Air Force and wider defence and

I am delighted to see Protector at RAF Waddington."

Head of Remotely Piloted Air System DE&S, Simon Holford said: "The arrival of the first Protector system in the UK is a major milestone for the project. It reflects all of the hard work that everyone involved has put in to reach this stage, and we are immensely proud of our achievements. However, we can't rest on our laurels as there is much more to do. Now assembled, this aircraft will be used to perform initial UK flight trials ahead of progressively delivering the capability to the RAF next year."

Arrival of 15 further aircraft from General Atomics in the US into the UK will be a phased delivery over the coming years. All aircraft are expected to be delivered by the end of 2025.

GDLS Selected to Participate in US Army's Robotic Combat Vehicle Competition

General Dynamics Land Systems announced that it is one of four companies selected by the U.S. Army to compete for its Robotic Combat Vehicle (RCV) program of record. General Dynamics Land Systems will design, build and deliver two prototypes of its modular TRX (Tracked Robot 10-ton) robotic combat vehicle in Phase I of the multi-phase competition. The prototypes will be delivered to the Army by August 2024 to support platform mobility testing and a Soldier touchpoint.

TRX supports Army objectives for a robotic combat vehicle that is highly transportable and provides significant growth, interoperability and modularity to accommodate a wide range of future mission modules and payloads. TRX is built to maneuver at speed with all formations and has a class-leading payload-to-chassis ratio of 1:1.

TRX's architecture enables it to support RCV platform requirements and future growth. It generates significant exportable power to support mission command operations and is hybrid-electric, in support of the Army's climate and electrification strategy.

"We are honored to have been chosen to continue to work with the Army on the Robotic Combat Vehicle program," said Gordon Stein, General Dynamics Land Systems vice president and general manager for U.S. operations. "TRX features innovative thinking, ranging



from its AI-enhanced design to advanced, lightweight materials and a hybrid-electric propulsion system. Its power and size make it an ideal platform for multirole Human Machine Integration on today's battlefield.

"TRX provides superior performance as an enabling technology in critical battlefield roles, including direct and indirect fire, long-range loitering munitions, short-

range air defense, counter-uncrewed aerial systems, autonomous resupply, complex obstacle breaching, electronic warfare and reconnaissance. It is designed to provide increased situational awareness and lethality to enable Army maneuver and combat support formations to win decisively through cutting-edge human-machine integration."

Textron Systems Selected By US Army for FTUAS Program Option 2

Textron Systems Corporation announced that it was selected by the U.S. Army for the Future Tactical Uncrewed Aircraft System (FTUAS) Program of Record Option 2 award. By completing the FTUAS program Option 1 requirements successfully, Textron Systems now moves forward into Option 2 of the contract. During Option 2, Textron Systems will refine its proposed design based on the Army's Modular Open System Approach (MOSA) requirements, concluding with a critical design review. Textron Systems' offering for the program is its Aerosonde® Mk. 4.8 Hybrid Quad (HQ) uncrewed aircraft system (UAS).

With over 35 separate payload integrations and ability to carry multiple payloads simultaneously, the Aerosonde HQ has proven its interoperability and operational agility. Built for the Army's Brigade Combat Teams (BCTs), the Aerosonde Mk. 4.8 HQ's multi-payload capability



gives these groups at the tactical edge greater flexibility in equipping the sensors needed for the environment and the mission. Textron Systems' continued investment in integrating

and demonstrating payloads provides a low-risk solution to meet the Army's needs.

"With 30+ years of UAS experience accumulated over three million flight hours, we have established a mature, reliable and ready ecosystem to support our Army customer," said Wayne Prender, Senior Vice President of Air Systems. "We've designed our system to be adaptable so that as technology evolves, the Aerosonde UAS is able to support our soldiers not only in the near term but in the future as well."

The Aerosonde HQ platform offers multi-mission capability built upon a family of systems which have amassed over 600,000 flight hours. The aircraft's size, weight and power (SWAP) profile are optimized to deliver wide area surveillance, day/night full-motion video, communications relay, signals intelligence and more.

SHIELD AI + SENTIENT'S MULTI-YEAR AGREEMENT TO OFFER AI-ENABLED SITUATIONAL AWARENESS



A groundbreaking AI technology collaboration between Shield AI, an American defense technology company building the world's best AI pilot, and Sentient Vision Systems (Sentient), an Australia-based leader in AI-enabled real-time situational awareness to deliver a next generation wide area motion imagery (WAMI) solution has been given the green light with a LTA (Long Term Agreement) to supply Sentient's ViDAR® solution on the V-BAT VTOL UAS.

"The supply contract is a multi-year, multi-units' agreement, with first deliveries planned for 2024," according to Sentient's CEO Mark Palmer, who made the joint announcement with Brett Darcey, Shield AI's Vice President of Product and Programs, at a reception attended by Australia's PM Anthony Albanese, and hosted by US Vice President Kamala

Harris in Washington, DC.

The companies previously announced the joint development and integration of a ViDAR-enabled, wide-area-search capability onto Shield AI's V-BAT unmanned aircraft, which will enable Shield AI's V-BAT to intelligently classify, track, and read-and-react to targets in dynamic missions. Combining ViDAR with Shield AI's Hivemind will provide the most advanced AI-piloted ISR sensor package in the world.

"Our partnership with Sentient Vision marks a major advancement in AI-driven situational awareness. Integrating ViDAR with our V-BAT platform showcases our dedication to giving allied warfighters the best AI tools so they can achieve a clear strategic edge," said Brandon Tseng, Shield AI's President, Co-founder, and former U.S. Navy SEAL.

ViDAR is Sentient's AI system, which uses an Electro-Optic or Infrared (EO/IR) sensor to detect and classify targets in the imagery stream that would be invisible to a human operator or to a conventional radar. With these enhanced capabilities, V-BAT will be even more proficient in executing the most challenging missions, offering a level of capability that significantly bolsters threat deterrence, thereby reinforcing international peace and security.

"The confirmation of our long-term relationship absolutely reflects the AI technology workstream that is underlined in the AUKUS Pillar 2. Explained Sentient's newly appointed CEO, Mark Palmer. "Innovation stemmed from our computer vision AI-enabled ViDAR and Shield AI's Hivemind will provide commanders with immediate situational awareness and survivability of our warfighters."



Teledyne FLIR Defense Unveils New Black Hornet 4 Personal Reconnaissance System

Teledyne FLIR Defense, part of Teledyne Technologies Incorporated is introduced its new Black Hornet® 4 Personal Reconnaissance System at Association of the U.S. Army (AUSA) conference in Washington D.C. Black Hornet 4 represents the next generation of lightweight nano-drones, building on its predecessor to deliver enhanced covert situational awareness to small units. A new 12-megapixel daytime camera with superior low-light performance, plus new high-resolution thermal imager, deliver crisp video and still images to the operator. At just 70 grams, Black Hornet 4 has a flying time of more than 30 minutes, range greater than two kilometers, and can fly in 25-knot winds. Flight performance has been augmented by new obstacle avoidance capabilities and an advanced battery.

Compared to small quad-rotor drones, the single rotor Black Hornet 4 unmanned aerial vehicle (UAV) has an extremely low visual and audible signature, enabling it to identify threats day or night without being detected. Able to launch in less than 20 seconds and well suited for missions in GPS-denied environments, the Black Hornet 4 UAV can be used to rapidly identify targets beyond visual line-of-sight and assess weapon effects in real-time.

"Black Hornet 4 takes the features and capabilities that made Black Hornet 3 world renowned to the next level," said Dr. JihFen Lei, executive vice president and general manager of Teledyne FLIR Defense. "We've worked closely with customers and end users to make this system even more valuable for dismounted soldiers in need of situational understanding or engaged in covert operations, where precise and immediate intel is crucial.

"Black Hornet 4 is future-proof nano-drone technology," Lei added.

FLIR Defense has delivered more than 20,000 Black Hornet PRS systems to military and security forces in over 40 countries. Black Hornet drones are currently being used in Ukraine through donations made by the British and Norwegian governments, where they have performed successfully in numerous missions under the harshest of environments.

The U.S. Army began acquiring Black Hornets five years ago as part of its Soldier Borne Sensor program and since then has placed orders totaling more than \$125 million. In July, the Army awarded Teledyne FLIR a five-year contract worth up to \$94 million for additional Black Hornet systems.

Rheinmetall's Path A-kit - A Platform Agnostic, Next-Gen System That Bings Critical Autonomous Capabilities to Any Vehicle

The Rheinmetall PATH A-Kit is a navigation system that enables full autonomous movement of vehicles. It can be rapidly integrated onto existing vehicles or the latest next-generation platforms. It is a core element of Rheinmetall's exceptional Mission Master family of autonomous vehicles and combines advanced sensors, technology leading algorithms, and real-time data analysis to allow vehicle platforms to operate autonomously in a wide range of operating environments. Fielded and tested on this family of vehicles, but also a wide array of other platforms, the PATH A-Kit is a mature, proven technology that stands out from the competition.

In addition to facilitating fully autonomous operations, the PATH A-Kit software includes wireless technology that is loaded onto a Safe Tablet. The tablet is a modular, configurable device that enables remote operation of any vehicle equipped with the PATH A-Kit, as demonstrated on the Mission Master family of vehicles. The Safe Tablet can be used to control different mission module payloads (surveillance, weapons, cargo, etc.), making it the preferred portable control station for the Mission Master family of vehicles and mission modules they carry.

American Rheinmetall is now bringing ground-breaking advancements in autonomous systems to the U.S. defense market at a critical time with Rheinmetall's PATH A-Kit, a ready-now, mature and proven solution, with advanced capabilities that ensures future force mobility that is agile, versatile, persistent, reliable, survivable and lethal.



SAAB COLLABORATES IN NATO UNDERWATER EXERCISES

Saab's underwater systems supported elements of two 'operational experimentation exercises' involving over 2,000 civilian and military personnel from 15 NATO nations, Ireland and Sweden.

In September, Saab deployed the AUV62-AT anti-submarine warfare training target, alongside the Remotely Operated Vehicle (ROV), Seaeeye Falcon. The Seaeeye Falcon was operated from the Portuguese Navy Vessel, Dom Carlos I, while the AUV62-AT was operated from a naval base. Both systems participated throughout the two exercises, REPMUS 23 and DYNAMIC MESSENGER 23, over a total of three weeks. The aim of the exercises were to explore experimental marine unmanned systems in an operational context.

Saab's AUV62-AT, in co-operation with Sweden's defence procurement agency, FMV, supported Anti-Submarine Warfare systems brought by navies, industry and academic experts. It did this by being used to mimic the acoustic profile of a submarine, tailored for the exercises that they could then hunt for and track. The data AUV62-AT collected was then used to provide rapid feedback to the various systems, informing future methods of deployment.

As part of the Critical Undersea Infrastructure



aspects of the exercises, Seaeeye Falcon demonstrated its operational flexibility and reliability in a range of underwater tasks. It was crucial in the identification, relocation and neutralisation of simulated Underwater Explosive Devices placed on an underwater communications cable. This included the laying of targets and conducting underwater procedures used to make suspicious hazards safe, and their remote recovery for forensic analysis. This phase of the exercise was designed and conducted by Saab UK.

"It has been a privilege to collaborate with NATO and industry experts in exploring how we tackle the developing threats against our Critical Undersea Infrastructure, a defensive capability which no doubt will see more activity in the coming years," says Dean Rosenfield, Chief Marketing Officer and Managing Director, Saab UK.

Saab looks forward to attending future REPMUS and DYNAMIC MESSENGER exercises, with more capabilities from its portfolio.

Kraken Robotics Supports Multiple Countries at NATO Exercise

Kraken Robotics Inc is pleased to announce its recent participation at Exercise REPMUS 23 in Portugal. The Robotic Experimentation and Prototyping with Maritime Unmanned System (REPMUS) is focused on capability development and interoperability, and the 2023 Exercise involved 15 NATO partners, as well as Sweden and Ireland. Kraken's field support team was onsite throughout the exercise, working closely with three NATO navy teams (the US, UK, and Netherlands) utilizing three generations of HII's REMUS unmanned underwater vehicles (UUVs), all of which were retrofitted with Kraken's Man-Portable Synthetic Aperture Sonar (MP-SAS). The UUVs included MK18



Mod 1, REMUS 100 NGR, and REMUS 300 underwater vehicles, showing the versatility of MP-SAS and its capability to be used across multiple platforms.

Kraken's MP-SAS provided ultra-high resolution real time 3 cm x 3 cm imagery, with

swaths of over 200 meters (>100 meters range per side), providing operators with a significantly increased area coverage rate when compared to legacy sidescan sonars (SSS) with typical ranges of <30 meters per side. Kraken also took part in a historic multi-national collaborative underwater vehicle mission, where the US Navy MK 18 Mod 2 conducted a Search-Classify-Map (SCM) mission including embedded Automated Target Recognition (ATR) identifying contacts of interest, and using SeeByte's Neptune automatically re-tasking the Royal Navy REMUS 100 and the Netherlands Navy REMUS 100 with Kraken SAS to perform Reacquire and Identification (RI) missions.

HII IS AWARDED \$347M US NAVY LIONFISH SMALL UUV CONTRACT

HII announced that its Mission Technologies division was awarded a contract to build nine small unmanned undersea vehicles (SUUV) for the U.S. Navy's Lionfish System program. The contract has the potential to grow to as many as 200 vehicles over the next five years with a total value of more than \$347 million. The Lionfish System, based on HII's REMUS 300, is a highly portable, two-person SUUV with an open architecture design and versatile payload options. In early 2022, REMUS 300 was chosen as the Navy's official program of record for the next-generation SUUV.

Administered by Naval Sea Systems Command, this contract provides for the delivery and support of the Navy's next generation SUUVs, as well as afloat and auxiliary support equipment and engineering services. The vehicles, incorporating the latest in autonomous and unmanned technology, will conduct critical undersea missions for the Navy.

"Lionfish provides increased capability and interoperability that aligns with the Navy's undersea priorities, and we look forward to delivering next-generation vehicles that can readily adapt to and support a variety of mission needs,"




said Andy Green, executive vice president of HII and president of Mission Technologies.

"We are pleased with the Navy's decision to support a combat-proven technology, essential to the Navy's undersea mission," said Duane Fotheringham, president of Mission Technologies' Unmanned Systems business group. "Our team is committed to delivering fully capable vehicles that will enhance the effectiveness of the warfighter against emerging threats."

The Lionfish System was developed through

an innovative process with the Department of Defense's Defense Innovation Unit and the Navy that incorporated feedback from multiple user groups to uniquely meet the needs of the warfighters. HII is the largest producer of unmanned undersea vehicles (UUV) worldwide. Serving customers in more than 30 countries, HII provides design, autonomy, manufacturing, testing, operations and sustainment of unmanned systems, including UUVs and unmanned surface vessels (USV).



Global monthly E-magazine for Drones

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Drones world Editor Kartikeya in conversation with

Mr. Teppei Seki
Director - Terra Drone



TerraDrone

Q Our readers love to hear the stories from the industry people. Why don't you share yours?

A Terra Drone is a global drone services venture with the mission to 'create the next industrial revolution from the sky.' The company currently has offices in six countries: Japan, Indonesia, Malaysia, Saudi Arabia, Belgium, and the Netherlands. As of October 2023, it is expanding its services to a total of 11 countries.

The current president founded the company in 2016 with the vision of creating a world-class organization. Leveraging rapid global expansion, the company aggressively expanded worldwide right from the start. In fact, within just six months of the company's launch, the founder was already traveling around the world.

However, not everything went smoothly. The company initially chose Australia as its first destination due to demand in sectors like resource extraction, railroads, and pipelines, and the relatively low competition. Nevertheless, during that time, the company encountered challenges in gaining adoption for new products like drones and was forced to withdraw after approximately six months.

On the other hand, the company's global expansion

continued at an impressive pace. In March 2017, it established a base in Indonesia, focusing on providing support for 3D surveying, analysis, and modeling. In November 2018, the company acquired a Dutch company primarily serving the European industrial drone market. Today, this European subsidiary provides services, mainly to the oil industry.

Despite the ups and downs, the company has steadily built a successful global business. This track record led to a significant achievement in January 2023 when Terra Drone became the first Asian startup to secure 1.85 billion yen in funding from Wa'ed, the venture capital arm of Aramco, the world's second-largest company by market capitalization. This brought the total amount raised to 12.66 billion yen.

Even after that, at Terra Drone, we haven't slowed down our business expansion. We firmly believe in the critical role of Unmanned Traffic Management (UTM) as infrastructure supporting the entire next-generation mobility industry, including drones and flying cars. We've been investing in Unifly, a leading flight operation management system provider, since 2016. In July 2023, UTM acquired Unifly as a subsidiary, further strengthening our position in the industry. In September of the same year, we expanded into the agricultural sector by acquiring the business of Avirtech, a leading drone pesticide spraying company

with world-first technology, through our subsidiary in Indonesia.

These challenges we've taken on have propelled us to achieve the top position in the world in the Drone Service Providers Ranking by Drone Industry Insights in 2020 and maintain the second position for three consecutive years from 2021.

Q Can you elaborate on the technologies that you are working on and industries you serve?

A Terra Drone currently operates in the following four businesses:

Surveying: We develop and sell our own UAV laser drones (hardware) and software for surveying, and we provide services using these products. In addition to drones, we also offer services using the latest 3D surveying equipment.

Terra Drone develops UAV (Unmanned Aerial Vehicle) laser drones equipped with embedded LiDAR (Light Detection and Ranging) technology.

Terra Drone's UAV laser drone offers the following key features:

Highly Accurate Surveying: UAV drones equipped with LiDAR sensors can generate highly accurate 3D models of terrain, buildings, vegetation, and other objects. This capability provides precise information for land surveying and progress monitoring in construction projects.

Fast Data Collection: UAV

laser drones can cover extensive areas in a relatively short time, enabling rapid data collection and efficient operations.

Operation in Challenging Environments: LiDAR technology enables precise data collection in challenging environments such as forests and tree plantations, as it can penetrate tree foliage and objects beneath the ground surface.

Data Analysis and Visualization: Data collected by the UAV laser drone is presented in the form of maps, 3D models, and point cloud data for analysis and visualization using GIS (Geographic Information System) software.

Terra Drone's UAV laser drones find diverse applications in land surveying, construction, environmental monitoring, forestry, mining, urban planning, and various other fields.

In the field of surveying, our company boasts a world-class track record with over 2,000 drone surveying and inspection projects completed, primarily for major general contractors and construction consultants.

Inspection: We provide a range of solutions using our original UT drones for inspecting tanks, boilers, and other infrastructure facilities, primarily in the petrochemical industry. Our services encompass hardware and software development, as well as service provision.

Terra Drone has developed



its own “UT Drone” equipped with an ultrasonic inspection function that enables thickness inspection without damaging the tank’s surface, a groundbreaking innovation in drone technology. This technology allows for actual thickness inspection and data analysis on the tank’s surface plates.

The use of non-destructive ultrasonic waves for plate thickness inspection offers the advantage of reducing the time typically required for erecting and dismantling temporary scaffolding for work at heights. This results in a 40-60% reduction in inspection time, leading to cost savings and minimizing facility downtime during inspections, thus reducing opportunity losses.

The use of UT drones allows for a remarkable reduction in costs and work time, approximately one-tenth of what conventional drones require. Deployment is rapidly accelerating, with successful inspections conducted at Europe’s largest oil refinery for Shell, as well as drone

inspection demonstration tests with BASF, the world’s largest integrated chemical manufacturer, and INPEX in Japan, among other notable projects.

Also, our European subsidiary, Terra Inspectioneering, in collaboration with our partner, PowerFox in Australia, has achieved a significant milestone in the inspection industry by conducting a comprehensive visual inspection of the inside of a surge bin along with ultrasonic inspection. This achievement marks a world-first in inspection technology, promising enhanced safety, reduced downtime, and unparalleled efficiency for inspecting surge bin interiors.

UTM: We develop platforms for next-generation air mobility systems, which include drones and flying vehicles. Additionally, we conduct research to ensure the safe operation of next-generation air mobility systems.

Terra Drone has developed Terra UTM, a service for safely

managing multiple UASOs (Unmanned Aircraft Systems Operations). Terra UTM offers essential information for safe drone operations, including real-time data on both unmanned and manned aircraft, with a collision avoidance function that coordinates the movements of these aircraft.

Unify, a group company, is a global leader in UTM installations, including at the national level. It has successfully established the UTM system in eight countries, including Canada, Spain, Germany, and Saudi Arabia.

Additionally, Terra Drone, in collaboration with Mitsui & Co., the Japan Aerospace Exploration Agency (JAXA), and Asahi Koyo Corporation, has been selected for the “Air Mobility Integrated Flight Operation Management Platform Project” in response to the public solicitation for Expo 2010 Osaka/Kansai.

Agriculture: We utilize our self-developed drones with groundbreaking technology for applying agricultural chemicals and fertilizers, as well as pest extermination. Additionally, we employ mapping drones for surveying farmland and analyzing weeds and crop abnormalities.

Furthermore, we have developed the world’s first gimbal-based spraying system, which offers high precision with an accuracy within a spray radius of 10 cm.

 **What is your biggest**

USP that differentiates the company from competitors?

A We believe our USP lies in our holistic approach to next-generation air mobility. This approach encompasses comprehensive software development for drones and flying cars, hardware design and development, and the delivery of services and solutions using drones. Rather than isolating each component, we offer an integrated solution.

Another of our strengths is our multinational and diverse approach. By operating across multiple countries and embracing a variety of cultures, we accumulate a wealth of knowledge and accomplishments. This diversity enables us to harness our collective experiences and expertise in versatile ways, making our solutions more inclusive and globally relevant.

Terra Drone has been meeting and acquiring global drone companies since the early days of drone operations, gaining valuable insights into profitable industries and business models. This has resulted in the development of our new ventures, including tank inspection in geopolitical Europe, surveying in Japan, and pesticide spraying for palm oil production in Southeast Asia.

In the mid- to long-term, the company is also exploring the development of safe and efficient air infrastructure, such as UTM, and engaging in research and development of flying vehicles.



Q What are your predictions about the future of the drone industry and the advent of disruptive technologies?

A We believe that drones will be increasingly regulated and evolved as hardware in the future.

As drones become even more popular, we believe that trends such as weight reduction of hardware, maximization of flight time, and price reduction will occur one after another, just like smartphones in the past. As this happens, there will be more and more things that can be done with drones.

We also believe that more drone flights will be conducted in urban areas in the future. At that time, UTMs will become indispensable as the infrastructure in the sky that we are currently focusing on, and we believe that their importance will attract more and more attention.

Q According to you, which is the biggest market for business concern? What are the other markets you are eyeing in the near future?

A In the short term, we are focusing on the surveying and inspection areas where we are currently developing our business, and in the medium to long term, we are eyeing UTM, logistics, and flying cars.

Q What are your suggestions to youngsters/ entrepreneurs who wish to enter into the Drone Industry?

A The drone and flying car-related industries are still in their infancy, but we firmly believe that the time will come when they will permeate the world and become commonplace. Therefore, it's crucial to persevere, stay committed, and adapt to evolving technology and major trends.

LILIUM JET BECOMES 1ST EVTOL FOR PRIVATE SALE IN THE US IN PIONEERING PARTNERSHIP WITH EMCJET



Lilium N.V. developer of the first all-electric vertical take-off and landing (“eVTOL”) jet, has opened private sales of its eVTOL jets in the U.S. market, in partnership with EMCJET, an industry-leading full-service aircraft brokerage and management company. EMCJET is set to be the exclusive Lilium dealer in Texas through 2030 for private sales. Under the terms of the partnership, which includes a commercial commitment to Lilium for five production slots, EMCJET will enable individuals to purchase some of the first Lilium Pioneer Edition Jets available in the U.S. market. This announcement is the first step in unlocking the U.S. private aviation market, the largest private aviation market, for Lilium and follows Lilium’s commercial strategy to start in the premium market before expanding to the airline and passenger shuttle market.

EMCJET, renowned for its expertise in international aircraft trading and services, is dedicated to offering customers a seamless and sophisticated experience when it comes to buying, selling, and acquiring aircraft. The Lilium

Jet will be available countrywide, with the initial focus on key cities in Texas, including Austin, Houston, San Antonio, and Dallas, aligning with Texas’ commitment to sustainability, delivering efficient and eco-friendly transportation choices for residents and visitors.

“We are thrilled to partner with EMCJET as we embark on our mission to revolutionize regional air mobility in the United States. EMCJET’s proven track record of private premium market jet sales in the U.S. and managing privately owned aircraft and exceptional customer service aligns seamlessly with Lilium’s vision of delivering an unparalleled flying experience to our potential customers,” said Sebastien Borel, Chief Commercial Officer at Lilium.

The Lilium Pioneer Edition Jet is Lilium’s planned first edition version of the Lilium Jet being sold to private individuals across the globe. The Lilium Jet is an all-electric vertical take-off and landing jet, designed to offer leading capacity, low noise, and high performance with zero operating emissions purpose-built for regional connectivity.

“EMCJET is excited to be at the forefront of introducing Lilium’s groundbreaking eVTOL technology to the Texas and U.S. markets, said Memo Montemayor, Founder & CEO of EMCJET, “Our client-first mentality ensures that we deliver superior value and expert attention required in making sound private aviation investments and introducing our clients to the most innovative modern technology for current and future market practices. This partnership with Lilium will allow us to serve our well-established network of aviation enthusiasts with the latest technological advancements and continue to provide exceptional service and results that our clients deserve and depend on.”

The agreement with EMCJET marks Lilium’s fourth dealer globally.

“Dealers and aircraft management companies are eager to partner with Lilium on jet sales to help decarbonize general aviation and provide an elevated flying experience, all while being incredibly efficient to operate,” added Borel.

ARCHER ACHIEVES KEY FLIGHT TEST PROGRAM MILESTONE AS MIDNIGHT TAKES FLIGHT

Archer Aviation Inc, a leader in electric vertical takeoff and landing (eVTOL) aircraft, announced that its flight test program hit another key milestone as the company's Midnight aircraft took flight. This milestone builds on Archer's four years of flight testing, including two years of full-scale flight testing with Maker.

"This next phase of Archer's flight test program is only possible because of the four years of flight testing we've done. Midnight is building on the successes of its predecessor aircraft and represents another significant step forward in Archer's path to commercialization," said Archer's founder and CEO Adam Goldstein. "The next year and a half will be focused on continuing to rapidly advance our flight test program and Archer's electric air taxi operations as we prepare to bring Midnight to market in 2025."

"Having taken seven full-size eVTOL aircraft from design to flight test during my career in the



eVTOL industry, today's milestone with Midnight marks the most significant flight to date bringing Archer and the eVTOL industry another step closer to bringing a scalable and commercially viable aircraft to market," said Archer COO Tom Muniz.

As Archer's flight test program continues to advance, Midnight's flight envelope is expected

to progress rapidly from hover to full wing-borne transition flight in the coming months, paving the way for the company to begin "for credit" testing of its Midnight aircraft with the FAA next year as it works towards entry into service in 2025.

Simultaneous with the Midnight flight test program, Archer intends to continue Maker's flight test program as well as flying simulated commercial routes to continue to advance the company's operational readiness.

Archer's goal is to transform urban travel, replacing 60-90-minute commutes by car with estimated 10-20 minute electric air taxi flights that are safe, sustainable, low noise, and cost-competitive with ground transportation. Archer's Midnight is a piloted, four-passenger aircraft designed to perform rapid back-to-back flights with minimal charge time between flights.

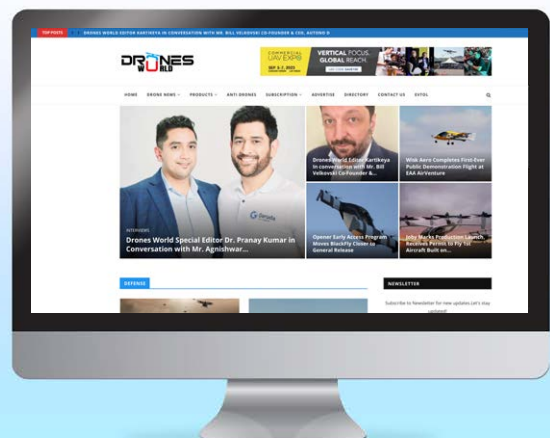


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EHANG SUCCESSFULLY OBTAINS TYPE CERTIFICATE FOR EH216-S PASSENGER-CARRYING UAV SYSTEM ISSUED BY CAAC

EHang Holdings Limited The EH216-S stands as a pioneering technological and product innovation with significant differences from conventional aircraft in key areas including technical architecture, configuration, performance, functionality, operational mode and flight environment. For the EH216-S type certification, CAAC and EHang upheld conventional century-old aviation principles alongside an innovation-centric approach, which involved formulating specific certification basis and means of compliance tailored to the EH216-S's distinctive technical features, to conduct the type certification work.

In the realm of airworthiness certification standards, CAAC assembled leading experts from local authorities, aviation institutions and research organizations, and formally published the Special Conditions for the EH216-S UAV System (the "Special Conditions") in February 2022. Amidst a global landscape where eVTOL aviation airworthiness regulations are still evolving, it is a pioneering initiative that China has formulated a rigorous and scientific regulatory framework of airworthiness certification for the EH216-S passenger-carrying UAV system. This represents the collective expertise of CAAC, EHang, and unmanned aviation professionals nationwide, and provides a robust foundation for more efficient and wide-scale airworthiness certification for aircraft of this kind in China and abroad.

During the validation process, the EH216-S underwent extensive laboratory, ground, and flight tests at professional aviation laboratories and test sites across multiple locations in China. These tests included but were not limited to main material performance, structural strength, flame resistance, crashworthiness, gas toxicity, environmental conditions of equipment and systems, software simulation, data links, ground control stations, overall system functionality, electromagnetic compatibility, flight performance and flight stability characteristics. The validation process scrutinized components, equipment, and the entire aircraft for prefabricated defects, faults and interferences during both laboratory experiments and flight trials. With that, the safety, airworthiness, performance, functionality, usability and reliability of the EH216-S have been



thoroughly and rigorously validated through over 500 specific test items, more than 40,000 test flights for adjustments, and formal conformity validation tests encompassing 65 major categories and over 450 individual test items. CAAC's experience and expertise in conducting the EH216-S airworthiness certification provides a significant reference for the global aviation industry and plays a pivotal role in shaping regulations, standards, and norms for unmanned eVTOL airworthiness certification, serving as a crucial benchmark for the industry worldwide.

Mr. Huazhi Hu, Founder, Chairman and CEO of EHang, remarked, "I extend my heartfelt gratitude to CAAC, the expert team, and all EHang employees for their unwavering dedication. Our self-developed EH216-S passenger-carrying UAV system has finally met high expectation to secure the first TC in the global eVTOL industry, marking a significant chapter in civil aviation history. Embracing the TC as our springboard, we will launch commercial operations of the EH216-S unmanned eVTOLs, prioritizing safety above all. This will enable us to steadily progress towards our strategic goal to be a UAM platform operator, and commit to our mission to enable safe, autonomous, and eco-friendly air mobility accessible to everyone."

the world's leading urban air mobility ("UAM") technology platform company, announced that the EH216-S, its self-developed passenger-

carrying unmanned aerial vehicle ("UAV") system, has obtained the type certificate ("TC") officially issued by the Civil Aviation Administration of China ("CAAC"). This demonstrates that the EH216-S's model design fully complies with CAAC's safety standards and airworthiness requirements, and that the EH216-S is qualified for conducting passenger-carrying UAV commercial operations. As the world's first TC for unmanned electric vertical take-off and landing aircraft ("eVTOL"), the EH216-S TC not only sets a benchmark for the airworthiness certification of innovative eVTOLs in China and overseas, but also serves as an epoch-making milestone for commercial UAM operations.

The EH216-S TC awarding ceremony was held at the CAMIC International Convention Center in Beijing on October 13, during which CAAC issued the EH216-S TC to EHang.

Since CAAC formally accepted EHang's EH216-S TC application in January 2021, the EHang team worked closely with CAAC and its expert team towards validating and verifying the aircraft's innovative cutting-edge technologies. After more than 1,000 days and nights of persistent efforts, they overcame all kinds of difficulties and challenges to successfully complete all type certification objectives, proving that EHang is fully capable of independently designing, developing, and manufacturing mature unmanned eVTOL products.



Opener Announces Helix, its First Scalable Production Aircraft; Changes Company Name to Pivotal

Opener, the market leader in light electric vertical takeoff and landing (eVTOL) aircraft announces Helix, its first scalable production vehicle, and unveils its new identity. Now named Pivotal, this step represents the company's trailblazing influence on the industry and its transition to become a product-delivering entity serving the needs of customers in multiple segments. As a pioneer, Pivotal is renowned for the BlackFly, the first eVTOL of its kind to be sold and delivered to customers.

"With Helix, we become the leading manufacturer of light eVTOL aircraft. Helix presents the next iteration of 10+ years of innovating, testing, and delivering on the promise to give individuals access to small, yet mighty aircraft. Pivotal reflects our mission to transform movement with the power of flight," said Ken Karklin, CEO, Pivotal. "The new identity shows the versatility of our system architecture and encapsulates both the exhilaration and utility of flight."

Helix pricing and availability

The base price for a Helix aircraft is \$190,000. Beginning on January 9, 2024, Pivotal customers will be able to place orders with a deposit of 25% of the purchase price. First customer shipments commence on June 10, 2024. Based on delivery timing, customers will select their available training dates. Pricing for options and accessories will be rolled out as they become available.

Airbus Helicopters Pioneers User-friendly Ways to fly eVTOLs

Airbus Helicopters' demonstrator FlightLab has successfully tested an electric flight control system in preparation of a new human machine interface (HMI) that will equip CityAirbus NextGen, Airbus' eVTOL prototype. This milestone represents an important step towards ushering in a new generation of electric powered urban air mobility aircraft.

The pilot controls have been considerably simplified thanks to the enhanced piloting assistance provided by the electric flight control system. Marking a first in the helicopter industry, one single piloting stick replaces the three conventional pilot controls (cyclic, pedals, collective) and is able to control all aircraft axes. Using the single stick, the pilot is able to perform all maneuvers: take-off & landing, climb, descent, acceleration, deceleration, turn, and approach.

The single stick takes up less space, offers improved visibility to the pilot and is combined with a revised HMI which uses simple displays, providing a selection of information specifically tailored to eVTOLs.

"From the start, we designed this system considering every certification parameter in mind as it will be a big step forward in validating the design of our urban air mobility eVTOL, CityAirbus NextGen. The advantage of an electric flight control system is enormous, especially when it comes to reducing pilot workload and ultimately enhancing mission safety. It is also a great example of how our demonstrators are used to mature the techno-bricks necessary to prepare the future of vertical flight," says Tomasz Krysinski, Head of Research & Innovation at Airbus Helicopters.

After the success of the flight test campaign Airbus Helicopters is working on finalising the details of this new system before new tests are conducted in the framework of Vertex, a project conducted in partnership with Airbus UpNext that will advance autonomy even further by managing navigation and simplifying mission preparation.

Airbus has been one of the pioneers in exploring how electric propulsion can help drive the development of new kinds of aerial vehicles. In September 2021, the company unveiled its fully electric eVTOL prototype, CityAirbus NextGen. Airbus is developing an advanced air mobility solution with eVTOLs, not only to offer a new mobility service, but also as an important step in its mission to reduce emissions in aviation across its product range.



EHang Delivers 5 Units of EH216-S AAVs to Boling in Shenzhen

EHang Holdings Limited, the world's leading autonomous aerial vehicle ("AAV") technology Platform Company, announced that it has delivered five units of EH216-S to a new customer, Shenzhen Boling Holding Group Co., Ltd. ("Boling"), as part of Boling's plan to purchase up to 100 units of EH216-S from EHang. The delivery of the first five units to Boling in Shenzhen is the initial step of the Company's commercial plans in launching aerial tourism and sightseeing experience services in Shenzhen under EHang's strategic partnership with Bao'an District government and joint efforts with local customer Boling. The AAVs are expected to be used for regular flight operations at EHang's first Urban Air Mobility ("UAM") Operation Demonstration Center at OH Bay in Bao'an District following the CAAC's type certification of EH216-S, which will lay a solid foundation for future commercial EH216-S operations in Shenzhen, a pioneering city dedicated to developing China's low-altitude economy.

Furthermore, Boling aims to be a long-term AAV operator in Shenzhen through collaboration with EHang, and deploy the EH216-S AAVs purchased for activities such as aerial sightseeing and experience flights, further expanding the UAM strategic layout in Shenzhen.

UAM is a key aspect of the low-altitude economy. According to the recently released Implementation



Plan for Innovative Development of Low-Altitude Economy Industries in Bao'an District, Shenzhen (2023-2025) by the local government, a multitude of business scenarios will be developed in UAM, aerial sightseeing, aerial logistics, emergency rescue, smart city management, industrial applications, and entertainment. Over 50 unmanned flight routes are planned with over 100 low-altitude aircraft take-off and landing platforms deployed in a grid pattern.

Guanshen Xu, Chairman of Boling, stated, "The low-altitude economy holds promising prospects, and I am thrilled to collaborate with EHang, a leading company in this sector. We look forward to taking the initiative in conducting flights at OH Bay to accumulate practical experience for continuous expansion across Shenzhen, as well as the Greater Bay Area encompassing Guangdong, Hong Kong, and Macau.

We are confident that integrating passenger-carrying autonomous aerial vehicles with our businesses will bring forth a more intelligent and convenient way of life for everyone."

Xin Fang, Chief Operating Officer of EHang, stated, "As the type certification of EH216-S is close to completion, our preparations for post-certification operations are in full swing. Shenzhen Bao'an District, with its unique industrial ecosystem and conducive conditions for developing the low-altitude economy, is an ideal region for deploying commercial EH216-S operations. EHang is pleased to join forces with Boling and pioneer UAM operations in Shenzhen. We look ahead to working together in developing UAM operations alongside promoting UAM solutions worldwide by leveraging the high-quality resources in Bao'an District."

FIRST HIGH VOLTAGE ELECTRICAL HARNESSES ROLL OFF THE LINE FOR THE ALL-ELECTRIC LILIUM JET

Lilium N.V. developer of the first all-electric vertical take-off and landing ("eVTOL") jet, announced that the first high-voltage electrical harnesses for the Lilium Jet have been completed. The announcement marks another important achievement on the path to first assembly, industrialization, and entry into service of the revolutionary Lilium Jet.

A collaboration between Lilium, its design and build partner for electrical wiring integration, GKN Aerospace, and connector supplier, Rosenberger, the high voltage electrical harnesses represent a critical system on the Lilium Jet. The harness system, for which Lilium has been granted patents in the U.S. and Europe, is essential for the Lilium Jet's safety critical power distribution architecture. An electrical harness is a system of cables bundled into a single secure sleeve to protect, optimize space and simplify installation.



Designed for safety and redundancy, the harnesses will act as the aircraft's main electrical arteries, distributing power from the ten batteries, located on the sides of the fuselage, to the jet propulsion units, embedded into the aircraft's main wings and canards. The harness system has been optimized for high performance at low weight enabling a voltage of more than 900 V. Yves Yemsi, COO of Lilium, commented: "We are delighted with the progress made in building this section of the electrical wiring system. Today's milestone again confirms our approach of partnering

with established aerospace suppliers for an efficient aircraft development program."

John Pritchard, President of Civil Airframe at GKN Aerospace commented: "This collaboration has enabled us to leverage and build on the capabilities of each company. We are proud that our electrical wiring systems technology, our design expertise and our ability to manufacture at scale is helping Lilium make sustainable regional aviation a reality." Marc Käumle, Executive Vice President Business Area Interconnect, Rosenberger said: "Electric aviation is on its way, and we are pleased to be a part of it. We have been designing and manufacturing connectors and cable assemblies over many years for a variety of aviation applications. We look forward to extending our capabilities into the eVTOL space as part of the Lilium Jet team."

Emirates Post Group Signs LoI with Dronamics to Explore Implementing Cargo Drone Deliveries

Emirates Post Group (EPG) and Dronamics, the world's first cargo drone airline and a leading innovator in cargo drone technology, have signed a Letter of Intent (LOI) to explore transformative solutions in logistics through advanced cargo drone capabilities in the UAE.

The LOI, signed during the official launch of the Smart and Autonomous Vehicles Industry (SAVI) Cluster in Abu Dhabi, marks the beginning of a dynamic collaboration set to redefine cargo drone delivery in the United Arab Emirates. SAVI is set to become a globally leading smart and autonomous vehicle hub, with dominance across air, land, and sea, attracting relevant OEMs, startups, researchers, and talent.

Under the terms of this LOI, EPG will explore and trial Dronamics' cargo drone service to enable same-day middle-mile and long-range deliveries. Both organizations will collaborate towards developing a comprehensive cargo drone delivery network in the UAE and GCC. Once successfully piloted, EPG intends to integrate this innovative technology into its logistics network and enable access of the technology to the wider logistics industry. In addition, EPG intends to be a launch partner of the future Dronamics UAE joint venture to support the expansion of their cargo drone operations in the region.

"With a shared vision of reshaping the future of the logistics sector, EPG and Dronamics are dedicated



to enhancing cargo delivery speed, sustainability, and efficiency by deploying state-of-the-art drone technology. This partnership represents a significant milestone in the advancement of autonomous cargo drone transportation." Abdulla Mohammed Alashram, Group CEO of Emirates Post Group

Dronamics, renowned for its pioneering work in the cargo drone industry, has successfully conducted tests of its cutting-edge drones, validating their potential to serve various industries. The company's vertical integration, encompassing drone aircraft design, construction, operation, and the creation of Droneports, positions it as a formidable force capable of revolutionizing the same-day logistics sector.

"Partnering with Emirates Post Group provides us with the exciting opportunity to work on our

expansion to the Middle East and the United Arab Emirates in particular. Through this agreement we will look to implement our unique middle-mile cargo drone technology on the UAE market in service of EPG, its customers and its universal service mandate - an important step to achieving our vision of enabling same-day delivery for everyone everywhere." Svilen Rangelov, CEO and Co-Founder of Dronamics

As part of this LoI, Emirates Post Group will enable Dronamics, through its postal and express business managed by Emirates Post, to conduct Proof-of-Concept (POC) flights in the UAE with at least one drone aircraft by 2024. The strategic partnership with Dronamics, with its advanced technologies, will support EPG's efforts in enabling the overall delivery supply chain of logistics operations in the UAE.

CargoTron joins Drone Logistics Ecosystem, targets middle/last mile B2B delivery services

We are delighted to announce the membership of the drone manufacturer CargoTron as the latest member to Drone Logistics Ecosystem (DLE). The company is working on development of a drone platform specifically used in the middle/last mile B2B delivery services. DLE is supporting engagement of other members to collaborate with CargoTron, we are keen to support startups to accelerate faster. CargoTron has revealed the PD250 in April this year, a remotely piloted, one-tonne, hybrid eVTOL that can deliver a 250 kg payload over 600 km. Primary use case of PD250 is B2B express/less than truck load parcel deliveries overcoming constraints in ground transportation and congestion.

Thanks to down-folding wings, it can take-off/



land in loading areas, car parks etc. Other use cases include delivery of humanitarian aid, emergency cargo, equipment to offshore/wind farm vertiports plus para-military and military tasks. Customers have identified benefits to transport different volumes and types of cargo such as general B2B supplies, refrigerated medical aid, and maintenance equipment to remote zones not easily accessible and at low cost. Target customers include logistic supply companies, humanitarian aid/emergency

supply operators, offshore wind farm operators, coastguards, para-military and military. Unique selling points include smallest safe landing zone, customisable cargo pods, quick changeover of cargo pods on ground, lowest acquisition and operating costs.

"eVTOL cargo drones are slowly overtaking demand from passenger versions. Remotely piloted cargo drones are becoming increasingly popular, both Deloitte and SMG project cargo drones taking a greater share of the eVTOL market from 2025-2030. PD250's standard cargo-pod is designed to house two half-size Euro-pallets with up to 250 kg payload. In parallel to that PD250 can carry customized cargo-pods to accommodate refrigerated or bulk cargo." Mr Ross Kelly, CEO of CARGO TRON.



Drones world Editor Kartikeya
in conversation with

Mr. Jia Xu
CEO - SKYGRID



Q Could you brief our readers about SkyGrid and your role in leading it?

A SkyGrid is at the forefront of integrating autonomous flight into our daily lives, aiming to make it routine, efficient, and incredibly safe. As CEO, my role is to drive this mission forward, ensuring that we build high-assurance services to enable the benefits of autonomous flight for all. My leadership focuses on strategic planning, fostering innovation, and ensuring that our solutions address the critical challenges of safety and security in unmanned aerial systems (UAS).

Q Can you elaborate on SkyGrid's product offerings and what unique advantages this offers to the emerging urban air mobility ecosystem?

A SkyGrid exists to open the sky for autonomous flight.

We build high-assurance 3rd party services to unlock the benefits of autonomous flight for all. Our offerings include a suite of high-assurance services for remotely piloted aircraft, encompassing secure data integration, navigation assistance, mission planning tools, and ground-based systems to enhance situational awareness for remote pilots.

The advantage of choosing SkyGrid lies in our holistic approach. We provide a single, cohesive platform that not only addresses technical and operational requirements but also complies with the evolving regulatory landscape. This ensures that our clients can operate at the forefront of urban air mobility, with safety, efficiency, and scalability as their foundation. By simplifying the complexity of autonomous flight operations, SkyGrid is catalyzing the growth and integration of unmanned

systems into the national airspace, accelerating the future of advanced air mobility.

Q How is SkyGrid addressing the challenge of safely integrating autonomous aircraft into existing airspace?

A The integration of autonomous aircraft into existing airspace is a multifaceted challenge that SkyGrid is addressing through a variety of innovative approaches:

Advanced Airspace Management Solutions: By automating airspace management, we are transforming the way airspace is monitored and controlled. This enables the integration of autonomous aircraft into the airspace without causing disruptions to traditional aviation operations.

High-Assurance Third-Party

Services: As a robust Provider of Services for UAM (PSU), SkyGrid ensures that every service we offer meets the highest standards of integrity and reliability, fostering trust in the safety and efficiency of autonomous flight.

Innovative Traffic Awareness Systems: We acknowledge that space traffic awareness is a critical challenge for UAS operations. SkyGrid is pioneering solutions in this domain to ensure that autonomous aircraft can be aware of their surroundings and take the necessary actions to maintain safety.

Scalability and Adaptation to AAM: We are actively working on developing new paradigms for airspace management that can scale with the growth of AAM. This means creating systems that can manage not just a handful of helicopters over a city, but potentially thousands of autonomous aircraft operating simultaneously.

Collaboration with Stakeholders: SkyGrid believes in the power of collaboration. We are engaging with regulatory authorities, industry partners, and other stakeholders to ensure that the framework we develop for autonomous flight is robust, scalable, and aligned with global standards.

By addressing these critical areas, SkyGrid is paving the way for a future where autonomous aircraft can coexist seamlessly with manned aircraft, delivering on the promise of advanced aerial mobility and autonomous aviation for economic and social benefit.



Q How would you like to inspire the Drone-prenuers with your call on ‘Need for Innovation’?

A To all drone entrepreneurs out there, the message is clear: innovation is not just needed; it’s imperative. The future of autonomous flight depends on our collective ability to think outside the box, to create solutions that ensure safety, and to embrace the hard work that comes with trailblazing. I encourage you to innovate boldly, take calculated risks, and contribute to the ecosystem that will bring about a new era in aviation.

Q Can you walk us through the history of SkyGrid, from its inception to its current state, highlighting key milestones in the company’s evolution?

A SkyGrid’s journey began in 2018, born from a joint venture between Boeing and SparkCognition, with a shared

vision of shaping the future of unmanned aerial systems (UAS) and their safe integration into the national airspace.

Initially, our focus was on Unmanned Traffic Management (UTM) and command and control for small UAS. We’ve made significant strides by launching sophisticated mission planning tools compatible with iOS and Android, which have been well-received and have provided us with valuable commercial insights and validation.

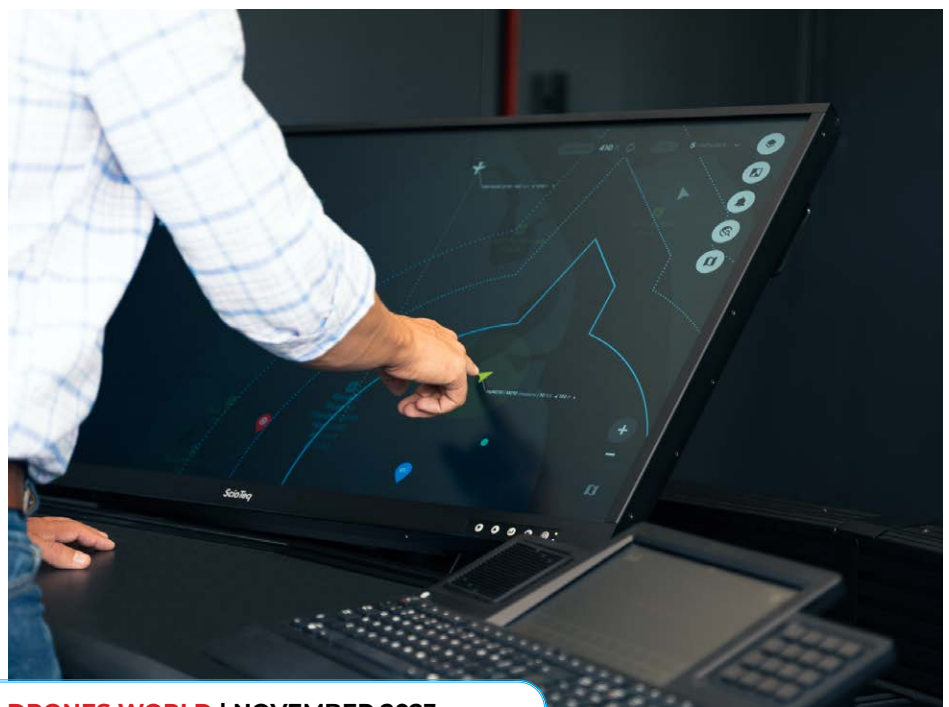
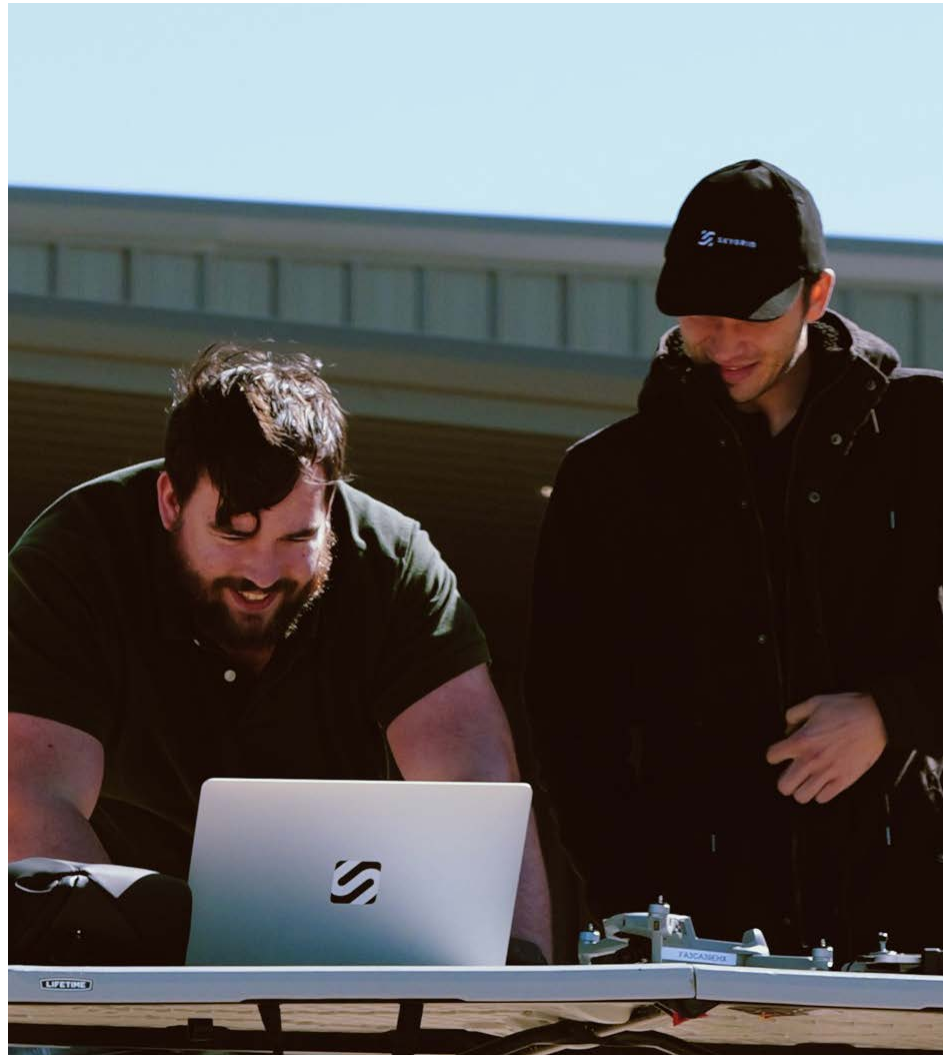
As we progressed, it became evident that to fully realize the potential of autonomous flight, we needed to prioritize high safety and assurance. This assurance is crucial—it gives us the confidence required to support high-stakes operations and the freedom to operate within existing airspace frameworks. It also establishes the regulatory credibility that is essential for leadership in this space.

Throughout this evolution, we recognized that monetizing UTM services is a complex challenge, primarily because providing safety-critical data and services comes with immense responsibility and requires impeccable accuracy and reliability. At SkyGrid, we've chosen to tackle these challenges head-on, as we believe that this commitment to safety and assurance is the foundation for achieving meaningful and transformative outcomes in the aerospace industry.

Q What makes SkyGrid unique in the advanced aerial mobility (AAM) market?

A Our commitment to high-integrity system engineering and advanced airspace management sets us apart in the AAM market. Our key differentiator lies in our ability to integrate the best practices of current avionics and system development into third-party services. This approach is critical as it enables the Pilot in Command (PIC) to make tactical and safety-critical decisions remotely, compensating for the absence of a pilot in the cockpit.

Our solutions are designed to fuse diverse information sources, creating a highly accurate and up-to-date operating picture that drives autonomous operations. This capability is not just about managing the airspace but transforming it to accommodate the future of aviation, which includes a large-scale operation of autonomous flights.



DUBAI SILICON OASIS HOSTS GROUNDBREAKING THREE-WEEK BVLOS DRONE DELIVERY TRIALS CONDUCTED BY UAE-BASED JEEBLY AND SKYE AIR

Dubai Silicon Oasis (DSO), the specialised economic zone for innovation and knowledge and member of the Dubai Integrated Economic Zones Authority (DIEZ), hosted a groundbreaking three-week long Beyond Visual Line of Sight (BVLOS) drone delivery trials conducted by Jeebly LLC, a leading UAE-based logistics service provider and Skye Air Mobility, India's largest SaaS based autonomous drone delivery company.

The testing conducted in cooperation with the Dubai Future Foundation, the Dubai Civil Aviation Authority and Dubai Silicon Oasis, took place at the Dubai Experimental Zone in DSO. The Zone serves as a real-world test-bed for the development, evaluation and demonstration of robotics and autonomous systems. It was established as part of the Dubai Program to Enable Drone Transportation launched in November 2021 by His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of The Executive Council.

Eng. Muammar Al Katheeri, Chief Officer of Engineering and Sustainability at DIEZ, said: "Since its inception, DSO has placed the highest priority on supporting ambitious entrepreneurs who utilise advanced technologies to offer smart city solutions. In line with its status as a hub for innovation and knowledge and the Dubai Master Plan 2040, DSO joined the Dubai Program to Enable Drone Transportation. Since then, we have welcomed numerous innovators across a variety of sectors and industries to test run their drone delivery concepts. We are delighted to collaborate with Skye Air and Jeebly in piloting their BVLOS drone delivery systems at DSO and offer our expertise to support the success of their trials."

Ahmad Hasan Belqaizi, Executive Director, Aviation Safety and Environment Sector at the Dubai Civil Aviation Authority stated: "The success of the initial trials holds immense significance in identifying the regulatory and operational aspects that need to be developed and improved to create a strong foundation for enhancing the efficiency of commercial transport operations using drones. Reaching this goal requires strategic cooperation between the Dubai Civil Aviation Authority and its strategic partners involved in the project: Dubai Future Foundation and Dubai Silicon Oasis. This cooperation aims to enhance security and safety standards, to enable public and private entities



to use drones in providing the desired services. It will regulate activities related to the use of drones, and create an environment conducive to investment in this sector in order to contribute to the strategy to make Dubai a centre for the drone industry and smart and innovative air transportation systems."

"We are excited to take the next step in the last-mile logistics revolution," said Raman Pathak, CEO of Jeebly. "With this leap forward in drone deliveries, we aim to increase the efficiency of our transportation services by utilising drones for various purposes. Dubai provides the advanced infrastructure that enables us to test new drone solutions and ensure we are constantly innovating our services. This explorative drone project represents an effective and environmentally responsible solution for the delivery of small to medium-sized packages, in line with the Universal Postal Union's (UPU) sustainable development objectives. By supporting this project, we are confident that we can achieve our goals of being leaders in sustainability and efficiency through logistics," he added.

The trial showcased the safe and secure transportation of a wide range of consumer goods within the Dubai Silicon Oasis. The drone used for the trials, Skye Ship One, is Skye Air's flagship which comes with Skye Connect (proprietary connectivity

system), Skye Tunnel (navigation system), Multiple Safety systems including but not limited to parachute, collision avoidance, and more.

Skye Air's Founder & CEO, Ankit Kumar, emphasised the potential of drones to transform the logistics industry. "Skye Air is committed to pushing the boundaries of drone technology, and our partnership with Jeebly to participate in the Dubai programme reflects this shared ambition. We are thankful to the Dubai Civil Aviation Authority, Dubai Future Foundation, Dubai Silicon Oasis, and all other stakeholders of the programme to making it possible. Skye Ship One is by far the most reliable drone in India having conducted over 1,700 flights and it represents a significant leap forward in the world of logistics, and we are confident that this BVLOS trial will demonstrate the potential of drones to revolutionise last-mile delivery," he said.

Khalifa Al Qama, Director of Dubai Future Labs, confirmed that this new project supports Dubai's efforts to develop and expand the applications of drones in collaboration with government entities, private companies, and regulatory bodies. "This contributes to the creation of futuristic and high-quality solutions originating from Dubai, aimed at utilising drone technology to enhance the efficiency of diverse service and economic sectors," he concluded.

MANNED AND UNMANNED AIRCRAFT TO SHARE AIR SPACE AT CORPUS CHRISTI INTERNATIONAL AIRPORT

Mayor Paulette Guajardo and the Corpus Christi City Council approved a lease agreement between the Texas A&M University-Corpus Christi Lone Star Unmanned Aircraft System Center of Excellence and Innovation (LSUASC) and the Corpus Christi International Airport (CCIA).

The agreement enables simultaneous operations of manned and unmanned aircraft at the airport and within its airspace. The FAA, LSUASC, and CCIA will continue to work together over the course of the lease to build and expand the program.

"We are the first airport of our size to have unmanned and manned aircraft flying side by side," said Kevin Smith, Director of Aviation



at CCIA. "We are thrilled to welcome the Lone Star UAS program to our campus, and we look forward to the work that we'll do together."

The LSUASC is one of seven Federal Aviation Administration (FAA) Unmanned Aircraft System (UAS) test sites in the United States and was established in the Fall of 2013 as a research center at Texas A&M University-Corpus Christi.

WingtraOne GEN II drones are now C3 certified

Wingtra, developer of industry-leading VTOL survey and mapping drone technology, announced that its WingtraOne GEN II drone is now compliant according to C3 class requirements in accordance with the European Commission Delegated Regulation (EU) 2019/945 on unmanned aircraft systems.

"C3 class identification is a major milestone in Wingtra's commitment to the highest level of product quality and safety for drone operations in the European Union." Vaibhav Sawhney, Product Manager, Wingtra

"Building on our recent regulatory success of being awarded the first SORA SAIL III approval from the Federal Office of Civil Aviation [FOCA] in Switzerland, we continue developing a system that keeps safety and reliability as the unwavering foundation of all that we produce," Sawhney said.

For WingtraOne drones purchased from January 1, 2024, onwards, the C3 class identification allows the operator of WingtraOne GEN II to conduct flights in the open A3 category (low-risk commercial activity) within all EASA member states. All existing Wingtra customers who've purchased their systems before 2024 without the C3 mark can also continue to legally operate in the A3 category.



To be designated as a C3 aircraft, WingtraOne GEN II underwent rigorous testing and conformity evaluation by the notified body, NavCert GmbH, who was formally appointed by the LBA (Luftfahrt-Bundesamt-German Federal Aviation Agency). C3 class aircrafts weigh less than 25 kg maximum take-off weight (MTOM); have remote ID and geo-awareness, and are compliant with the safety standards—safe controllability and reliable command and control (C2) link—of the European Union. Marcel Visser, Managing Director of NavCert GmbH, stated: "Congratulations to Wingtra on achieving the C3 marking for the WingtraOne Gen II drone. We are honored to have been the notified body (NB 2603) responsible for assessing drones for the C mark. It has been a pleasure to experience Wingtra's simplified use combined with fully automated flights and vertical take-off and landing. With this select approach, we wish Wingtra many safe drone operations and a strong positive resonance within the European territory."

AgEagle's eBee Drones Receive EASA's C6 Certificate for BVLOS Flights in the European Union

AgEagle Aerial Systems Inc. an industry-leading provider of full stack flight hardware, sensors and software for commercial and government use announced that the eBee X™, eBee TAC™ Public Safety, eBee™ Ag and eBee™ Geo drones ("eBee X Series") have been designated with the C6 class identification label in accordance with the European Union ("EU") regulations.

As of January 1, 2024, drone operators of C6-labeled eBees will be able to conduct Beyond Visual Line of Sight ("BVLOS") operations with airspace observers over a controlled ground area in a sparsely populated environment throughout Europe. Operators simply need to submit a required declaration with their applicable National Aviation Authority indicating whether they intend to fly missions in accordance with the European Standard Scenario- ("STS") 01 or STS-02.

With this new certification, the eBee X Series become the only professional drones in the market with both C6 and C2 markings, providing distinct advantages to operators throughout Europe.

Barrett Mooney, Chairman and CEO of AgEagle, noted, "The inclusion of the C6 marking alongside our C2-labeled eBee drones will significantly enhance the market advantages for our European customers. It grants access to areas and operational modes restricted to drones weighing over 4 kg, all without the requirement for formal permissions or regulatory waivers. Currently, only eBee drones possess both the C2 and C6 marking, affirming their status as the safest choice for flying over people and conducting BVLOS operations."

To achieve the C6 classification, eBees underwent rigorous testing and evaluation by the notified body NavCert GmbH to confirm their compliance with specific EU criteria.

Marcel Visser, Managing Director of NavCert GmbH, stated, "Congratulations to AgEagle on achieving the C6 marking for the eBee X series drones. We are honored to have been the Notified Body (NB 2603) responsible for assessing the fixed-wing drones for the C mark. Our extensive experience and our contribution to the development of the EN 4709 standard have been invaluable in conducting the technical assessments mandated by the Commission Delegated Regulation (EU) 2019/945 on unmanned aircraft systems. We remain dedicated to upholding the requisite standards of quality and safety for drone operations within the European Union."

In addition, beyond the scope of C2 and C6 markings, the eBee X Series achieved another milestone in June 2022 by becoming the industry's first drones to receive a Design Verification Report (DVR) from EASA on M2 Ground Risk Mitigation. This pertains to the European "Specific Category" and allows for Operations Over People (OOP) and BVLOS flights under conditions not covered by EASA's standard scenario STS-02. The DVR facilitates European drone operators in seeking approvals from their respective National Aviation Authorities.



EUROPEAN MEDICAL DRONE SIGNS PURCHASE AGREEMENT WITH DUFOUR AEROSPACE



European Medical Drone, the Swedish drone operator focusing on connecting hospitals by means of drone transportation, and Dufour Aerospace, the Swiss eVTOL innovator signed a development cooperation and purchase agreement for 11 Aero2 uncrewed tilt-wing aircraft. The agreement includes the delivery of one Aero2 X23 prototype aircraft in 2024 and 10 serial Aero2 aircraft with delivery starting in 2026. Savback Helicopters, Swedish helicopter vendor and partner of Dufour Aerospace, is assisting this transaction.

"Dufour's Aero2 is exactly what we are looking for, and at this stage, we do not see another product offering the same features close to market entry," said Martin Braen, Founder of European Medical Drone. "Our mission is to facilitate sharing of vital resources among hospitals. Our system allows hospitals to request and receive essential supplies such as blood, medicines, and medical equipment. As we have a focus on connecting hospitals which are several hundred kilometres apart, we need long-range, heavy-lift, uncrewed aircraft with a lot of redundancy for safety. We do have very knowledgeable partners in our project, and with the addition of Dufour Aerospace, we will be one step closer to the aim of connecting hospitals with automated, fast and reliable transportation services also in large countries like Sweden. We are excited to team up with Dufour Aerospace to introduce our service in Scandinavia."

"Dufour Aerospace shares European Medical Drone's vision and values, and our Aero2 has exactly been designed for the delivery of critical cargo over long distances, facilitating today's logistics where this is beneficial," said Thomas Pfammatter, CEO and Co-founder of Dufour Aerospace. "Connecting hospitals in a fast, reliable and efficient way makes a lot of sense in our eyes, and this will even become more important in the future. We are very happy to support European Medical Drone with our products and contribute to their activities towards building a medical logistics network to the best of our abilities. This development cooperation and purchase contract is of particular importance to us, as it confirms that our high-level specifications meet not only use cases overseas, but also in Europe." "Savback Helicopters, as the sole, exclusive agent for the sales of Dufour Aerospace products in the Nordics, is proud to be a part of this groundbreaking collaboration, showcasing our commitment to advancing the future of aviation and medical logistics through cutting-edge technologies. Together with Dufour Aerospace, we look forward to supporting European Medical Drone's mission of creating a robust medical logistics network that offers swift, reliable, and efficient transportation services to hospitals in Scandinavia. From medical logistics to search and rescue operations, and from law enforcement to aerial surveying the Dufour Aero2 has been purposefully designed to meet the diverse needs of modern aviation. Its ability to seamlessly transition between roles and missions makes it a standout choice for a wide range of applications," said Michael Savback, Founder and CEO of Savback Helicopters.

The three companies will collaborate specifically with a view to introducing the Aero2 uncrewed aircraft on first routes between hospitals in Sweden, together with the partners of European Medical Drone. This work will include drafting the necessary concepts of operations, submitting the necessary documentation to the authorities, and carrying out trial operations to identify both the potential and limitations of operations and implementing use case specific requirements into the aircraft.

UAVIONIX ACQUIRES IRIS AUTOMATION



UAvionix, a leader in communications, navigation, and surveillance (CNS) solutions for the safe integration of Crewed and Uncrewed Aircraft Systems (UAS), has announced its acquisition of Iris Automation™, provider of optical Detect and Avoid (DAA) technology. This strategic move combines uAvionix's extensive CNS and aviation expertise with Iris' leadership in computer vision-based systems for the safe separation of aircraft. The acquisition not only bolsters uAvionix's capabilities and services but also marks an important leadership change as Jon Damush, former CEO of Iris Automation, takes the helm as CEO of uAvionix Corporation.

"The combination of Iris Automation's and uAvionix's capabilities provides for a multi-layered-safety architecture that supports integration of UAS into the National Airspace System," noted Paul Beard, CTO and founder of uAvionix. "Through our collective efforts, we are solving the two biggest technical challenges to UAS integration: Command and Control and Detect and Avoid. Solving these problems builds safer airspace for all users."

A Safe and Efficient Integrated Airspace

uAvionix's deep experience with avionics development and certification in crewed, uncrewed, and defense technologies have long provided innovative and cost-effective products and services that create cooperative communication and awareness for all airspace users, from the stratosphere to the airport surface. Iris Automation's pioneering airborne and ground-based optical systems deliver non-cooperative situational awareness for the integration of crewed and uncrewed aircraft. Together, the combined capabilities position uAvionix to provide aviators with the certified avionics, aviation data, and safety solutions necessary for a fully integrated airspace.

Jon Damush Assumes Role of CEO of uAvionix Corporation

As CEO, Jon Damush expands the current uAvionix leadership team and brings more than 30 years of aviation technology experience. His extensive background in engineering for crewed and uncrewed aviation, software development, and systems integration positions him as a visionary leader to guide uAvionix's growth across diverse markets, including General Aviation, Uncrewed Aviation, Defense, and Aviation Networks.

"Jon Damush's appointment as CEO hits all the right marks for uAvionix. His exceptional background and vision complement an already strong leadership team at uAvionix and aligns perfectly with the uAvionix mission to lead the way in advancing aviation safety and efficiency," said David Page, Partner at DC Capital Partners. "The addition of Iris' optical capabilities with existing uAvionix solutions further cements our market position within BVLOS operations."

FLYTBASE AND SKYQRAFT PARTNER TO ENABLE AUTONOMOUS POWER GRID ASSET MANAGEMENT

Enterprise drone autonomy software platform company, FlytBase, is excited to announce its strategic partnership with Skyqraft, a leading visual data analytics provider for the grid infrastructure. Through this collaboration, FlytBase and Skyqraft aim to empower system integrators and enterprises in the transmission and distribution sectors with autonomous drone operations and analytics on their grid infrastructure.

The Modern Energy Challenge

By 2045, the world's energy consumption is projected to double. As distribution and transmission operators work to increase capacity, they face aging infrastructure and increased complexity. To date, the tools for addressing these issues have been inadequate, failing to deliver precise data on grid health.

Furthermore, power grids are geographically distributed and frequently located in remote areas, making routine inspections a logistical nightmare, resulting in infrequent drone data collection. There has been a lack of a repeatable and scalable method for capturing drone data for fault identification, proactive maintenance, and extracting meaningful insights of the grid's health.

What the FlytBase-Skyqraft Partnership Delivers

FlytBase offers a cutting-edge drone autonomy software platform that empowers system integrators to execute fully automated BVLOS operations via drone-in-a-box systems that are managed from remote command centers. This platform ensures safe, repeatable data collection and seamlessly integrates with BVLOS hardware and software, such as parachutes, detect-and-avoid systems, uncrewed traffic management, and weather systems. Additionally, FlytBase offers advanced mission planning capabilities, dynamic route planning and tailored flight workflows to meet regulatory standards.

Furthermore, FlytBase adheres to the highest data protection standards, as shown by its ISO27001, SOC2 Type II, and GDPR compliance. The platform also offers a variety of deployment options, allowing



users to transition to localized cloud or on-premises deployments to meet customized data privacy requirements. The platform is extensible and can be integrated with various third-party software, including the Skyqraft's data analytics platform to provide a complete end-to-end solution.

Skyqraft's platform converts drone-captured images into actionable insights, arming power grid stakeholders with timely, crucial data. By merging machine learning with human-assured quality checks, it rapidly delivers precise asset data, either visualized on the platform or transferred to an asset management system.

Every component, from utility poles to individual insulator discs and their bolts, is meticulously detailed. This granular information enhances decision-making, aids efficient maintenance planning, and drives revenue optimization. Remarkably, Skyqraft identifies a tenfold increase in critical defects and spots numerous minor issues compared to traditional

inspections. These insights are concisely packaged into minor-issue and critical-defect reports, viewable within an intuitive map interface or as standalone documents. These reports are invaluable tools for grid upkeep, asset investments, and environmental considerations like vegetation control.

"Our partnership with Skyqraft aims to offer transmission and distribution industries an highly automated drone-based inspection platform," says Nitin Gupta, Founder & CEO of FlytBase, Inc. "Our aim is to simplify and streamline autonomous flight operations while providing critical insights that will improve power grid operation and maximize energy output."

John Smithers, Sales Director North America, highlights, "The collaboration between Skyqraft and FlytBase presents a comprehensive solution for grid owners, offering unparalleled capabilities in the realm of inspection automation, setting new standards in the industry."

DroneShield Adds Long-Range Radar, Enhances TestSite

DroneShield is pleased to announce the addition of the long-range RADA RPS-82 radar capabilities to its flagship DroneSentry System, to serve its most demanding multi-sensor customer deployments.

RPS-82 provides DroneSentry operators with a significantly enhanced radar detection, classification and tracking range for wide area, multi-mission requirements. With DroneSentry's compatibility with multiple radar platforms, DroneShield can offer both high-performance and cost-effective solutions to meet any customer requirement and/or budget.

RADA is internationally recognised as one of the leading counter-UAS radar system manufacturers, with a radar product family fielded widely by the US DoD and partner forces worldwide.

The RPS-82 was integrated into the DroneSentry system of sensors, rapidly leveraging the modular and open architecture of DroneSentry-C2, DroneShield's enterprise common operating picture platform. The Company is offering RADA RPS-82 radars with its DroneSentry solutions, available now to existing and prospective customers.

Angus Bean, DroneShield's CTO, commented "DroneShield is unique globally, in being both a sensor maker and an integrator, developing and manufacturing all of our products, except for the



hardware of radars and cameras, where we partner with best-in-breed specialist manufacturers.

Our command-and-control DroneSentry-C2 system intelligently fuses the output from various sensor types through our proprietary SFAI sensorfusion module, producing an easy-to-understand situational awareness and extensive reporting functionality.

DroneShield's radiofrequency sensors

remain the single best and core way of detecting drones. Where customer's deployment scenario and budget allow, multi-sensor detection provides a superior approach, when managed by an intelligent C2 software that is able to fuse together large amounts of sensor data and present the end user with an easy-to-understand situational awareness picture."

Alongside of integration of RPS-82, the Company has significantly upgraded its Blue Mountains remotely operated facility, to scale up and streamline the development and testing of its platforms. This includes field lessons from real-world deployments including Ukraine and other environments where drone threats have risen in prominence. The fully equipped site will allow the team to shorten development cycles and deliver firmware updates to DroneShield's subscribed customer base more efficiently. The upgraded test facility includes the integration of the RADA RPS-82 radar system, permanently installed onsite.

The upgraded Blue Mountains facility complements the Company's existing Northern Virginia-based testing facility in the U.S.



Verge Aero™ Launches New X7™ Drone Combining Cutting-Edge Hardware and Software Advancements for User-Friendly, All-in-One Drone Show System

Verge Aero, the leading drone show technology solution unveiled its new Verge Aero™ X7™ drone, bringing technological advancements into Verge Aero's all-in-one drone show product suite to further democratize entry to the aerial entertainment industry. With fully-integrated, user-friendly software for drone show design and management, as well as the most competitive prices on the market, the Verge Aero X7 aims to further lower barriers to entry into drone entertainment, making it even easier for individuals and organizations to produce drone shows of all sizes and complexity for any occasion. The Verge Aero X7 is now available for order, with offerings that include an entry-level package deal for new customers.

Announced at the UP.Summit, a gathering of the world's most innovative minds rethinking transportation, the Verge Aero X7 is designed for compact storage and shipping, and features new, industry-leading technologies to deliver long-lasting performance. The X7 offers a new battery system that offers rapid charging and longer battery life, as well as more precise GPS capabilities, bolstered wind and rain resistance, and user-friendly enhancements to the integrated control software.

The Verge Aero X7 can seamlessly integrate with any of the company's flagship X1 drone fleets, and builds upon the capabilities of the X1 model to provide a richer show experience. Through the X7's technical advancements, Verge Aero is able to streamline operations and workflows with its hardware and software to create an industry-leading experience. This single unified and simplified system greatly reduces the labor costs and pre-existing technical knowledge requirements associated with other drone show operations.

The X7's cutting-edge drone hardware is powered by Verge Aero's software built specifically for drone shows, including:



“Verge Aero’s mission is to make drone shows ubiquitous. With our user-friendly show design and management software, Verge Aero drones give operators a complete end-to-end solution at a price point that can enable mass adoption of this exciting, new technology,” said Nils Thorjussen, CEO of Verge Aero. **“The Verge Aero X7 represents the latest technological breakthroughs to help meet the booming demand for drone shows, with a product that removes the many barriers associated with entering the industry. We’re excited for the Verge Aero X7 to further democratize the drone show industry.”**

Verge Aero Design Studio, the industry's most advanced design software;

Verge Aero Flight Control Hub, the control center for the flight planning for a user's fleet;

Verge Aero's Skystream app, which delivers branding opportunities for operators and enhances audience engagement by delivering high-quality, synchronized audio to spectators' devices.

All Verge Aero customers also gain access to a digital content library, potential partnership opportunities, and dedicated support and training to help anyone, no matter their experience level, get their drone show business off the ground.

As part of the X7 launch, the Verge Aero team is offering a starter package for first-time customers looking to start their own drone show venture. The starter set includes fifty drones, with full access to the suite of software products and training opportunities to optimize an operator's timeline to create their drone shows. This package will be offered to customers at a reduced price, matching Verge Aero's mission to democratize the drone entertainment technology industry.

Everdrone introduces game-changing multipurpose E2 drone to revolutionize emergency response

Leveraging the knowledge and experience from successful cooperation with emergency responders in Sweden, Denmark, and the UK, Everdrone is set to improve its unique offer through the addition of a new state-of-the-art drone model. The multipurpose E2 drone will be able to carry both an advanced camera system as well as customizable medical kits - a combination that represents a true game-changer for first responders, and a revolution for emergency dispatch, enabling response times of two minutes on average.

In the wake of the successful cooperation with Region Västra Götaland, and ongoing work with Air Ambulance Charity Kent Surrey Sussex (KSS), and Hovedstadens Beredskab, Everdrone now amplifies and expands its overall capacity and capability. After successfully implementing drone deliveries of life-saving defibrillators (AED), as well as managing the technical and operational integration into emergency response infrastructure, the time has come to dial up the potential of the service.

Multipurpose capacity for increased service

With the new E2 multipurpose drone, emergency deliveries of time-sensitive medical equipment will now be complemented with the possibility of transmitting live hi-res and IR video, adding up to a unique multipurpose solution.

"The advantages the E2 drone and it's increase in payload capability makes possible are massive," says Everdrone CEO Mats Sällström. "The LiveView capability offers first responders the information needed to make critical assessment decisions that will help with prioritization and increase the safety of on-site responders. To this, we add the possibility of direct deliveries of anything from AEDs to EPI pens and anti-bleeding kits, or other vital medical equipment."

Designed for autonomy, speed, and safety

The combined Everdrone First on Scene™ service - with LiveView and MedKit deliveries - is based on one single premise: the need for speed, to save time. When emergencies or accidents occurs, every second counts, and besides the proven fact that



Everdrone can navigate to the scene of the incident faster than any ambulance or other responder, the take-off is lightning quick. From emergency services distress signal to lift-off, it takes a mere 15 seconds. Combined with predictive analysis of drone grid performance, the E2 enables response times of two minutes on average.

But not only the speed, and multipurpose capability sets Everdrone apart from other drone delivery solutions. High level of autonomy, all-weather operation and advanced safety features make Everdrone's service designed to operate in just about all areas in Europe, with a potential reach of more than 99% of all urban inhabitants in Europe.

A unique set-up that saves lives

Everdrone are no newcomers when it comes to breaking new ground in emergency response solutions. The Everdrone First on Scene™, with drone deliveries of AED units has been lauded as a success and has been validated in Sweden and Denmark and is set to be implemented into the response services of Air Ambulance Kent Surrey Sussex (KSS) in the UK. In Sweden, Everdrone's contribution to the lifesaving chain has been evidenced, not the least by helping save the life of a man in Trollhättan, Sweden, suffering an out-of-hospital cardiac arrest.

"It feels exciting to keep on building on what is a singular solution to medical emergencies, especially so now that we're broadening the scope to encompass not only equipment to patients and first responders, but just as much to their safety",

says Mats Sällström.

A highly anticipated development

"At Air Ambulance Charity Kent Surrey Sussex (KSS), we continuously strive to provide the best possible service to our patients. To achieve this, we embrace innovation to remain at the forefront of introducing new technologies and treatments. The multi-purpose drone is one of these innovations which has the potential to add immense value to the service we can provide to our patients", says Leigh Curtis, MBE, Executive Director of Service Delivery at KSS. "The combination of live-view and flexible emergency delivery capabilities will not only allow us to provide time critical assistance to a broader range of patients but will also potentially help our service to preplan and scale responses effectively, all of which has the potential to lead to improved outcomes for our patients."

"Imagine the power of immediate, accurate situational awareness", says Mats Sällström. "Awareness that will enable emergency responders, to assess incidents before they even arrive. Informed decision-making that ensures safer, quicker, and more effective responses. And then add delivery of vital medical equipment. This flexible, multipurpose combination is the most complete solution available on the market and will help transform emergency response services forever".

Everdrone's unique E2 drone system is developed in cooperation with Clogworks and will be available for orders today and expected live operational from Q2 2024.

PABLO AIR RAISES USD15.5M INVESTMENT FUNDING, PLANS TO EXPAND UTM SERVICES



Pablo Air, a drone and UAS operations company, has raised USD15.5 million funding from a Series A - 111 round. The additional investment brings the total raised by the company to USD28.41 million, with a possible stock market listing in the second half of 2024.

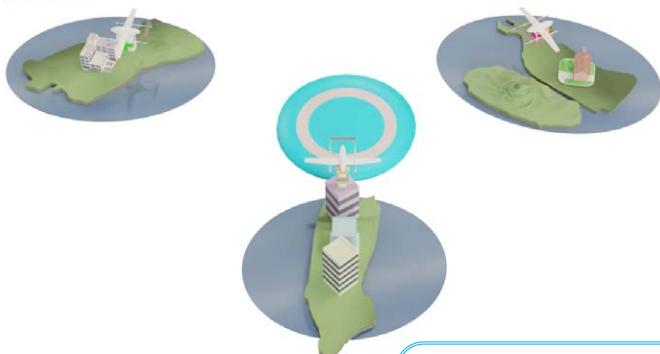
Investors of the latest round include Korea Development Bank, Be-High Investment-Kiwoom Asset Management, Lee Soo-man (an individual investor), Daishin Securities-SBI Investment, Yuanta Securities, Xplor Investment and Masang Soft, says Avfoil.

The company recently appointed Kenny (Won-kyung) Kim as the Vice President of its US subsidiary. Kim oversaw the drone light show event at the 2018 Pyeong Chang Winter Olympics while working for Intel. Pablo Air is developing export networks for drone sales that can perform multimedia shows with a fully equipped mass-production system.

Furthermore, Pablo Air last year obtained both flight operator licenses and night flight approvals for commercialising delivery drone services in South Korea, where the company opened its first delivery centre in the country.

In the field of UAM, Pablo Air aims to expand the domestic and international drone markets. This includes developing drone traffic management (UTM), analysing and digitising drone and aviation industry trends, as well as establishing the required ecosystem infrastructure.

Kim Young-Joon, CEO of Pablo Air, commented, "The funds raised in this latest investment will be a cornerstone for intensifying our technological capabilities and securing profitability. We plan to reinvest 10 percent of the money into startups that can synergise with us and help create the UAM ecosystem."



FAA SELECTS AIS, RESILIENX AND ONESKY TEAM FOR UTM RESEARCH

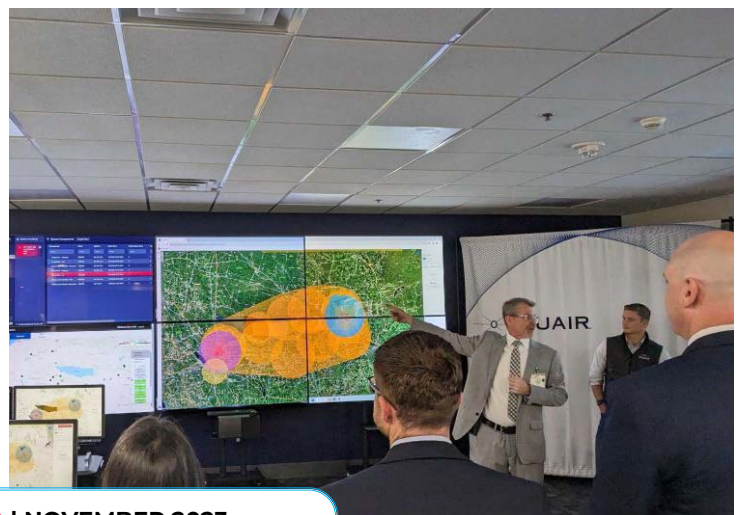


The Federal Aviation Administration (FAA) has selected a partnership between ResilienX, Assured Information Security (AIS), and OneSky to analyse and enhance the security and performance monitoring of uncrewed aircraft system traffic management (UTM) ecosystems. This research will focus on quantifying the effectiveness of various failure mode detection and mitigation strategies within a complex UAS operations environment. The output of the twelve-month effort will be to demonstrate safety and efficiency key performance indicators associated with mitigating issues that have been observed in UAS ecosystems. Testing will occur at the New York UAS Test Site.

ResilienX will provide in-time aviation safety management and OneSky will provide UTM domain experience to support design, test, and evaluation planning, execution, and reporting. The project will build on existing partnership to expand the integration of OneSky's UTM and ResilienX FRAIHMWORK, says the press release.

AIS supports critical cyber operations for the federal government, working with both the Department of Defense and the Intelligence Community.

The research will be conducted in collaboration with NUAIR. Over the past decade, NUAIR has built New York's 50-mile beyond visual line of sight (BVLOS) corridor and has conducted over 6,000 UAS flights to advance the industry.



Raytheon's KuRFS and Coyote Detect and Defeat UAS Targets during US Army Summer Test Period



Raytheon, an RTX business, successfully demonstrated the capabilities of the Low, slow, small-unmanned aircraft Integrated Defense System, or LIDS, during the U.S. Army's annual summer test period. Joining U.S. Army officials were representatives from a number of international allied ground forces who attended to witness the test events firsthand.

Raytheon's Ku-band Radio Frequency Sensor, known as KuRFS, and the Coyote® family of effectors provide the essential detect and defeat capabilities of LIDS, the Army's go-to counter-drone solution. Building on similar success at the Army's 2021 and 2022 summer test periods, KuRFS and Coyote proved effective again this year, meeting all test requirements against high-speed, maneuvering targets.

"This marks another milestone in the proven track record of success and performance of our counter-UAS capabilities," said Tom Laliberty, president of Land & Air Defense Systems at Raytheon. "As the threat of unmanned systems continues to grow, the performance and reliability of a complete C-UAS system is critical - and we remain committed to the continuous improvement of these systems to provide our customers with an effective solution to stay ahead of the threat."

The persistent, 360-degree KuRFS radar excelled in a stress test successfully detecting and tracking a complex swarm of more than 30 unmanned aircraft vehicles. Coyote defeated several targets, singles and swarms, demonstrating reduced engagement timelines to defeat multiple threats. The tests validated the recent hardware and software enhancements made to both systems, to optimize capability and performance.

International interest in the systems is high, with several allied countries requesting information and briefings. The U.S. Army is currently bolstering its counter-drone defenses with LIDS, awarding Raytheon an October 2022 contract to equip two Army divisions with LIDS, followed by a contract for an additional quantity of fixed site and mobile LIDS systems awarded earlier this year to further support the U.S. Army's Central Command. A third contract was recently awarded, intended to equip a third Army division.

Raytheon has developed the enabling technologies, as well as complete and customizable systems, that enable military and civilian customers to defeat complex UAS threats in any environment. The company has developed integrated, high-performing sensors and cost-effective kinetic and non-kinetic effectors that allow customers to select the right effectors against a range of threats and defeat threats more efficiently.

Anduril Announces Anvil-M Munition Variant of Interceptor Platform

Anduril is excited to unveil Anvil-M, a new munitions variant of its autonomous 'Anvil' interceptor drone that can effectively intercept and defeat threats from Group 1 and Group 2 unmanned aircraft systems.

With the addition of a fire control module that arms and detonates its munitions payload, Anvil-M is Anduril's most lethal variant of Anduril's interceptor platform. Through input from real-world combat operations and customer feedback from operational environments Anduril developed Anvil-M, a munition variant of Anvil, to more reliably and effectively engage and defeat higher-end, faster moving group-2 threats.

Anvil-M is part of Anduril's Counter-UAS family of systems that can be adapted and configured to meet the requirements of any mission environment. Anvil is a ground launched, low-collateral rotary wing interceptor designed to autonomously intercept potential drone threats and provide visual feedback of threats for positive identification by a human operator.

With its integrated 'Launch Box,' Anvil can



be located anywhere on a base to provide 24/7 remote launch at targets cued by Lattice, Anduril's AI-powered software platform. This autonomous user interface and command-and-control (C2) platform ingests aircraft tracks from various sensors, allowing human operators to engage with an appropriate effector, providing an end-to-end counter-UAS capability.

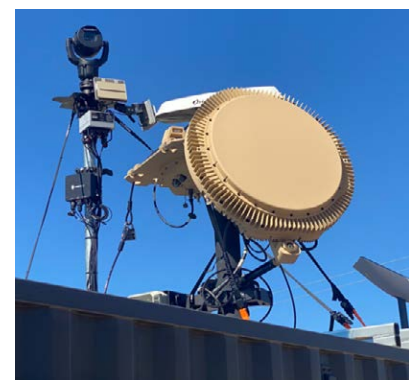
Anduril has worked with warfighters to field autonomous solutions to national security problems since 2017. Countering unmanned systems requires adaptable and layered capability that can keep pace with rapidly evolving threats and Anvil-M was designed to do exactly that.

DroneShield adds long-range radar, enhances test site

DroneShield has announced the addition of the long-range RADA RPS-82 radar capabilities to its flagship DroneSentry System, to serve its multi-sensor customer deployments. RPS-82 provides operators with enhanced radar detection, classification and tracking range for wide area, multi-mission requirements. It has been integrated into the DroneSentry system of sensors, rapidly leveraging the modular and open architecture of DroneSentry-C2.

"DroneShield is unique globally, in being both a sensor maker and an integrator, developing and manufacturing all of our products, except for the hardware of radars and cameras, where we partner with best-in-breed specialist manufacturers," said Angus Bean, DroneShield's CTO.

"Our command-and-control DroneSentry-C2 system intelligently fuses the output from various sensor types through our proprietary SFAI sensorfusion module, producing an easy to understand situational awareness and extensive



reporting functionality."

Alongside of integration of RPS-82, the company has upgraded its Blue Mountains remotely operated facility, to scale up and streamline the development and testing of its platforms. The site will allow the team to shorten development cycles and deliver firmware updates to DroneShield's subscribed customer base more efficiently, and includes the integration of the RADA RPS-82 radar system, permanently installed onsite.

Launch of Sensor FusionAI



DroneShield Limited is pleased to launch SensorFusionAI (SFAI), a sensor-agnostic, 3D data fusion engine for complex environments.

Angus Bean, DroneShield's CTO, commented "Detection of drones or Unmanned Aerial Systems (UAS) is moving towards multi-sensor approach for fixed site (and in certain situations, vehicle and ship systems) where the space and budget allows for such approach, due to ability to provide better detection results with multiple sensor modalities, such as radiofrequency, radar, acoustic and camera systems, either deployed in a single or across multiple nodes."

"However the multi-sensor approach only generates better results, with an intelligent software engine to fuse together the sensor outputs and give an intelligent set of outputs - otherwise adding more sensors is counterproductive as it creates more data without a clear way to manage it."

DroneShield has developed a true AI-based sensorfusion engine, initially for its own DroneSentry-C2 command-and-control system, including all common drone detection modalities (RF, radar, acoustics, camera). This separation

enables third party C2 manufacturers (including primes) to add SFAI to their C2 systems, on a subscription basis (SaaS), thus improving the performance.

Oleg Vornik, DroneShield's CEO, added "DroneShield seeks to be both the complete supplier of C-UAS solutions where possible, or a subcontractor where it makes sense. There will be numerous situations globally where the customer has an existing preference for another C2 supplier, based on their existing relationships or other requirements. Providing SFAI to such third party suppliers, maximises our market share and further monetises the IP that we have developed."

Key features of SFAI include:

Behaviour Analysis - Track an object to determine classification and predict trajectory.

Threat Assessment - Intelligently determine threat level based on a wide range of data types.

Confidence Levels - Designed for complex, high noise environments, with inconsistent data inputs.

After-Action Reporting - Sophisticated analytics presented in easy to interpret graphical dashboards.

Edge Processing - Utilises an edge processing device (SmartHub) for reduced network load and high scalability.

Versatile Adaptable Inputs - New sensors use existing software adaptors to improve integration time.

Output to Any Platform - Visualisation on DroneSentry-C2 or third-party C2 platforms, data analysis, alert systems or security management software.

SFAI has significant advantages over traditional multi-sensor C2 engines, whereby system sensors are utilised for their strengths with their weaknesses offset by the strengths of sensor types:

System intelligently builds a model informed by all inputs over time

Confidence values allow for soft sensitivity selection, reducing false positives or false negatives

Prediction model can interpolate paths for consistent tracking even with sparse data

Any incomplete or contradictory data mediated by comprehensive object model

All sensor data fused into one consistent intelligence packet

Dedrone Announces DedroneBeyond to Enable Scalable Drones as First Responder Operations in Partnership with Axon Air

Dedrone, the global leader in airspace security announced the launch of DedroneBeyond, its solution to enable drone operations to fly beyond visual line of sight (BVLOS) for state, local, territorial and tribal (SLTT) law enforcement and emergency services when deploying drone as first responders (DFR). Powered by the same computer-vision-enabled, sensor-fusion AI that currently protects over 500 sites around the world, DedroneBeyond delivers complete airspace situational awareness. This solution is being developed and tested in partnership with others, including Axon Air powered by DroneSense, for safe drone operation, providing an infrastructure for the positive drone economy to emerge.

“Drones can provide more than just a birds-eye view of a situation; they can arrive at a scene faster than humans and then enable assessment of an emerging incident to provide critical information for law enforcement and first responders to make better decisions before sending in personnel. Today, this potential is hampered by the need to always have human eyes on a drone,” said Aaditya Devarakonda, CEO of Dedrone. “DedroneBeyond unlocks that potential and makes it easier for law enforcement across the country to implement scalable DFR programs. DedroneBeyond is a natural extension for Dedrone, leveraging the company’s deep knowledge and technology foundation for aircraft detection and multi-sensor fusion, to further expand its global leadership in airspace security.”

To fly a drone BVLOS in the United States, the Federal Aviation Administration (FAA) must issue a certificate of authorization (COA) to the end user. To acquire a COA, an agency must show that its technology can reliably detect other aircraft to prevent mid-air collisions. DedroneBeyond layers Automatic Dependent Surveillance-Broadcast (ADS-B) detection into Dedrone’s existing premier detection and sensor-fusion technologies, technologies that have placed the company in a global leadership position for airspace security. By using a drone to assess a



Eliminating the need for human visual observers is the key to unlocking the value of DFR and bringing its benefits to a larger number of communities,» said Aydin Ghajar, General Manager of Axon Air. “We’re incredibly excited to add DedroneBeyond to the Axon Air offering and the value it can bring in combination with all the hardware, software, and professional services we offer to agencies to operate a lifesaving drone program successfully.



situation, law enforcement agencies can respond faster and be more resource efficient.

Embracing innovation is at the core of our mission to enhance public safety. Our partnership with Dedrone and Axon Air on the evaluation of the DedroneBeyond solution represents a crucial step towards strengthening our DFR program,” said Michael J. Bouchard, Sheriff, Oakland County, Mich. Sheriff’s Office. “This collaboration opens the door to exploring BVLOS operations, offering the potential to transform the way we respond to emergencies and keep our community safe.»

DedroneBeyond joins Dedrone’s suite of smart airspace security solutions, all of which leverage DedroneTracker.AI, the company’s global-leading command and control (C2) airspace security platform. With sophisticated AI models, the platform performs true sensor fusion to accurately monitor a drone’s flight path and behavior. Dedrone additionally offers this C2 capability across every kind of setting depending on customer needs, including DedroneCityWide, for zero-install drone detection and monitoring across wide areas, DedroneFixedSite, drone detection for critical infrastructure locations and mobile kits designed for specific situations, DedroneTactical for agile expeditionary environments and DedroneRapidResponse for mobile drone detection.

Singapore police's counter-drone system scans skies to keep major events safe

Thales, the global technology and defence leader, celebrated 50 years of operations in Singapore at a gala event hosted by Chairman and CEO of Thales Group, Patrice Caine and senior management executives. With Deputy Prime Minister and Coordinating Minister for Economic Policies Heng Swee Keat as the Guest-of-Honour, Thales announced several new investments in the country. Thales first established its presence in Singapore in 1973 to support aeronautics-related activities across Asia Pacific (APAC). Over the years, Thales has grown its capabilities and solutions to include national defence, space, transportation and most recently, digital identity & security solutions following the successful acquisition and integration of Gemalto in 2019.

Air Traffic Management Centre of Excellence: The Singapore Air Transport Industry Transformation Map (ITM) 2025 outlines key priorities to transform Singapore into a future-ready global aviation hub, including building a safe and sustainable air hub and pursuing innovation in better air traffic and unmanned systems. To this end, Thales has decided to establish an ATM Centre of Excellence in Singapore located at Thales' premises at Ayer Rajah Crescent.

The CoE will work on industrial applications and design activities for its world-leading Air Traffic Management system - TopSky-ATC, while also engaging regional air navigation service providers in future collaboration and innovation in the airspace. The ambition is to develop partnerships with SMEs, academia and other ATM stakeholders in the region to build an open and collaborative ATM ecosystem.

Over the next three years, the CoE will ramp up activities to promote the development of the ATM sector in Asia, leveraging the high level of expertise already established in Singapore. This will include additional hiring, with the ambition of having 120 ATM experts located in Singapore in the coming years.

ScaleFlyt Remote ID – Proudly 'Invented and Made-in-Singapore': As drones become increasingly ubiquitous, ensuring the airspace remains safe and secure is essential. A strong regulatory framework is necessary, including the ability for operators and regulators to develop a reliable and safe drone ecosystem.

ScaleFlyt Remote ID acts as a remote identification and location system for drones. The device was designed by the Thales Drone team in Singapore, which combines the competencies and resources of Thales' Avionics and Digital Identity & Security expertise, with the strong support of the Singapore Economic Development Board



(EDB). The product was trialled and certified over the past two years, and is the first UAV product designed and developed in Singapore and ready for commercial use in the global market.

With the ScaleFlyt Remote ID tracker, drones can communicate vital information such as location, altitude, and identification to air traffic controllers and other airspace stakeholders. This real-time sharing of data ensures situational awareness and allows for effective coordination between drone operators and airspace owners, mitigating risks of airspace conflicts. With this commercial first from Singapore, Thales intends to expand its drone activity in the future to include digital flight avionics and Urban Air Mobility solutions.

Opening of the Defence Hub : Thales also officially opens the Singapore Defence Hub on 6th October, with three pillars in Services, Engineering and Research. The Defence Hub will enhance long-term defence capabilities including maintenance, support, operational availability and indigenous development to meet the needs of the Singapore Armed Forces. A seasoned pool of experts situated in-country allows for a faster turnaround time and more hands-on approach to adapt to customer requirements and strengthen customer intimacy.

"Singapore is a strategic country for Thales, and a regional innovative hub for Asia. These announcements illustrate Singapore and Thales' joint innovation and digital ambitions, building together a more sustainable aviation future and more resilient defense capabilities serving Singapore Armed Forces. By growing local capabilities in close proximity to our customers and partners, we are providing technologies for a safer and more secure society across Asia." Patrice CAINE, Chairman and CEO, Thales Group.

Thales employs 2000 people in Singapore across four key sites. In the past five decades, Thales has also

entrenched a strong Research, Technology and Innovation footprint with multiple research facilities including a 15-year old joint lab at NTU with CNRS International, the Thales Digital Factory, Engineering Competency Centre, and joint labs with customers and partners.

"Thales has grown alongside Singapore through 50 years. Today we have a strong engineering and manufacturing core in Avionics and Digital Identity and Security. Building upon this foundation, our new investments in the Air Traffic Management Centre of Excellence will make of Singapore a world leading ATM technology hub. We are proud to invent here cutting-edge drone management technology for a safe and efficient use of drones. Our Defence Hub will also expand local capabilities that build resilience for critical systems that defend Singapore. We celebrate 50 years in Singapore with pride. As we look towards the next 50 years, our teams are working on next-generation technologies including Quantum, AI, 5G/6G, and cybersecurity that will continue to protect the world. We look forward to deepening our strong partnership with Singapore." Emily TAN, Country Director, Thales in Singapore.

"Singapore values our longstanding partnership with Thales. Thales' growing presence here has created exciting job opportunities for many Singaporeans across various functions such as manufacturing, research & development (R&D) and headquarters. Thales' collaborations with our research institutes, Institutes of Higher Learning and government agencies to develop new technologies and solutions have also advanced Singapore's competitiveness as a global node for innovation. My congratulations to Thales on its 50th anniversary in Singapore, and we look forward to deepening this partnership for many more years ahead," said PNG Cheong Boon, Chairman of the Singapore Economic Development Board (EDB).

DroneShield releases DroneSentry-X Mk2 for Multi-Mission Counter-UAS Applications



DroneShield is pleased to release the DroneSentry-X Mk2 ("DroneSentry-X"), a multi-mission Counter-UAS solution for mobile and expeditionary fixed-site applications. The DroneSentry-X supports passive detection, identification, tracking of multi-domain unmanned (or uncrewed) systems.

DroneSentry-X integrates DroneShield's advanced multi-mission AI/ML technology, RFAI for passive, non-intrusive detection with its new electronic countermeasure (ECM) technology, RFAI-ATK (RFAI "Attack") providing operators with the ability to detect, identify, track, and defeat (DITD) UxS from a single self-contained, intuitive system. DroneSentry-X Mk2 is the first platform in the Counter-UAS industry to offer RFAI-ATK.

The launch of DroneSentry-X follows extensive research and development incorporating end-user feedback on the primary feature sets, performance requirements, user interface, and interoperable must-haves. With interoperability in mind, the DroneSentry-X comes with an embedded RFAI user interface for local and tactical level situational awareness, while supporting Modular Open Systems Approach (MOSA) best practices for seamless integration with existing system of systems and third-party sensors, effectors, and command and control (C2) platforms.



Insitu and Innovaero to Develop Unmanned Aerial Attack Systems



Drone manufacturer Insitu Pacific (IPL) and aeronautical manufacturer Innovaero are to collaborate in the development of a long-range strike capability using uncrewed aircraft systems (UAS).

Insitu is a subsidiary of Boeing which is also building the MQ-28A Ghost Bat autonomous jet aircraft, formerly known as Loyal Wingman, while Innovaero is an Australian company based in Perth.

The two companies will 'coordinate' IPL's Integrator (pictured) which provides intelligence, surveillance and reconnaissance (ISR), and Innovaero's One-Way Loitering (OWL) munition which can strike a long-range target after circling overhead.

The managing director Insitu Pacific Andrew Duggan said: "This unified approach would combine uncrewed intelligence, surveillance and reconnaissance (ISR) and long-range strike capabilities to rapidly deliver direct effects in the engagement zone without the need for crews in larger air assets being put at risk.

"The concept is designed to achieve seamless integration with current Australian

Defence Force systems, including the Integrator, and offers great potential to become an integral strike asset."

Together, the companies will develop, test and field the collaborative system using Insitu Pacific's common ground control station (GCS) and INEXA software to control both UAS and long-range OWLs.

Operators would command both assets through the common GCS.

Innovaero Group CEO Simon Grosser said: "The versatility of the proposed combined ISR and strike solution provides a significantly shorter 'sensor to shooter' loop to engage emerging threats.

"Our collaboration with Insitu Pacific builds on our work with defence in Australia to develop an Australian loitering munitions capability, and offers an integrated solution for long range UAS target detection and effective engagement."

Development and testing for the Integrator/OWL system will continue through 2023. The announcement builds on a Memorandum of Agreement established between Insitu Pacific and Innovaero in July 2021.

CNH completes purchase of Hemisphere GNSS, consolidates guidance and connectivity tech capabilities

CNH Industrial has completed its purchase of the global satellite navigation technology leader Hemisphere GNSS (Hemisphere) for a total consideration of USD \$175 million - as announced on March 30, 2023. This acquisition solidifies CNH's in-house precision, automation and autonomy technology, enabling us to continue Breaking New Ground for the agriculture and construction industries. It furthers our vertical integration efforts to deliver cutting-edge core technologies to our customers' fleets for top performance, combined with a smooth and seamless user experience.

With Hemisphere's expertise and network, we are accelerating our strategic plan to attain leadership in automation technology, expedite delivery of a fully autonomous farming cycle, and extend and enhance automation and autonomy across a broad range of agriculture and



construction applications.

"Bringing Hemisphere's talent and resources into CNH reflects the energy and momentum of our investments in tech innovation. From 2024 onwards, we will bring notable value to customers through significant advancements in our journey from automating certain tasks to fully autonomous operation," said Marc Kermisch, Chief Digital & Information Officer at CNH.

CNH is devoted to customer-inspired innovation. We are making farming and building easier, more productive, and more sustainable by giving our customers smart machinery that helps them make informed decisions.

DeltaQuad and YellowScan team up for Lidar-powered 3D mapping

Lidar developer and manufacturer YellowScan and drone manufacturer DeltaQuad have announced a renewed partnership aimed at delivering high-quality 3D mapping data to professionals worldwide. The collaboration involves the integration of the YellowScan Surveyor Ultra Lidar system, which features an embedded camera, into the DeltaQuad Evo drone, offering dense point cloud data covering up to 1,200 hectares.

The YellowScan Surveyor Ultra is a lightweight 360° Lidar system with a 120° field of view, optimized for top-notch mapping and surveying. Distinguished by its high point density and lightweight design, it can now be fully utilized with the DeltaQuad Evo unmanned aerial vehicle (UAV). The Evo is a modern fixed-wing vertical take-off and landing (VTOL) UAV designed for versatile long-range missions.

Multiple payloads

Thanks to its modularity, the Evo can simultaneously carry multiple payloads, including the latest YellowScan Surveyor Ultra with an auxiliary battery, allowing the Evo to achieve flight times of up to 225 minutes and capture up to 100 data points per square metre. This data



can be rapidly and efficiently processed using the YellowScan CloudStation software, making the integration ideal for large-scale surveying projects.

Earlier this year, both companies had revealed that the Evo became the first fixed-wing eVTOL UAV to integrate YellowScan Lidar and RGB systems. Tristan Allouis, co-founder and CEO of YellowScan, expressed his excitement about the continued collaboration, stating, "Gradual progress is what empowers trembling innovations. Integrating the YellowScan Surveyor Ultra in DeltaQuad Evo is a small step but opens up the window of opportunities wider for many mapping and surveying experts." Douwe Zeeman, the CEO of DeltaQuad added: "It is a pleasure to see our products help professionals in different industries and regions. Now, enabled to fly longer distances, they can use the benefits of colorized Lidar to the maximum."

GeoComm and RapidSOS Empower Emergency Communications Centers to Convert Raw Z-axis Location Data into Dispatchable Locations



GeoComm, provider of Public Safety Location Intelligence®, and RapidSOS, creator of the world's first intelligent safety platform, are excited to announce that RapidSOS is offering a Floor Estimator feature powered by GeoComm Vertical Location Services. Currently available for 9-1-1 calls from Android-based devices, this feature empowers RapidSOS customers with the ability to convert raw z-axis position measurements into a dispatchable location. The service provides critical data resulting in reduced emergency response times that saves lives and protects property.

When a 9-1-1 call is received at an Emergency Call Center (ECC), emergency call takers are able to view z-axis location information in an actionable format. This is a transformational opportunity for the Public Safety industry, which will now have access to floor-level actionable data on 9-1-1 callers throughout the United States.

GeoComm Vertical Location Services uses nationwide open-source data for elevation and building details to estimate a caller's vertical location along with additional details about that location, such as a building name. There are no requirements for local GIS data to run the system, but results can be improved by accessing a paid upgrade to Vertical Location Services, which provides additional relevant information about indoor spaces, including indoor maps and details about what is inside buildings along with other data being delivered in GeoComm Vertical Location Services query responses.

"Through this partnership, we empower our customers with actionable z-axis position measurements," said Edward Parkinson, President of Public Sector at RapidSOS. "This data enables ECCs across the country to more efficiently and effectively identify, communicate, and navigate to 9-1-1 caller's locations inside multistory buildings, resulting in reduced emergency response times that saves property and lives."



Millennium Announces Successful Acquisition of DeBauche Communication Services

Millennium, a pioneering force in the broadband industry, is thrilled to announce a strategic milestone in its journey to accelerate the construction of fiber optic networks in underserved areas of the US and Canada. Millennium is announcing its successful acquisition of DeBauche Communications Services, a distinguished player in data engineering and design services.

This milestone event marks a significant moment in Millennium's history and bolsters Millennium's commitment to advancing services for clients in the telecommunications and broadband industry.

DeBauche Communications Services, brings a wealth of expertise and experience to the Millennium team with engineering services in Wisconsin, Illinois, Arkansas, and Texas, for the past 16 years. Their rich background in traditional engineering knowledge compliments Millennium's existing strengths and will contribute to the delivery of innovative solutions and exceptional client experiences.

James Kyle, Founder and CEO of Millennium, expresses his enthusiasm about this strategic acquisition.

"We are excited to announce the successful acquisition of DeBauche Communications Services," said James Kyle, CEO of Millennium. "This strategic move aligns with our 'One Millennium' vision and



positions us to accelerate fiber to the home builds for local and regional providers with traditional design layered in with our GIS and project management technology. We warmly welcome our new colleagues from DeBauche Communications and look forward to integrating their talents into our dynamic team."

The acquisition of DeBauche Communications Services not only enhances Millennium's competitive edge but also aligns with Millennium's commitment to deliver excellence, innovation, and client satisfaction. As the team harnesses the synergy of this partnership,

clients can look forward to even more comprehensive and powerful solutions to drive success and empower the communities in which they serve.

"We extend our heartfelt appreciation to the Millennium family for their dedication and hard work," added James Kyle. "This milestone achievement is a testament to their efforts and exemplifies what we can accomplish together. As we embark on this exciting new chapter, let us continue to uphold our values, ensuring professionalism, empathy, accessibility, and clarity in all our endeavors."

NEOM in deal to exchange geospatial data in cities management

The General Authority for Survey and Geospatial Information (GASGI) has signed an agreement with NEOM on the geospatial sector and associated geospatial infrastructure (geodesy, marine surveying, aerial surveying and photography, remote sensing, and geospatial data), and exchanging experiences concerning supervision, management, organization, licensing, qualification, sharing and exchanging geospatial data and information to find technical and technological solutions in the management of cognitive cities, reported SPA.

The MoU was signed by GASGI Chairman Engineer Mohammed Yahya Al Sayel and NEOM Chief Executive Officer Engineer Nadhmi Al Nasr, at a key event in



Riyadh.

The agreement reflects the two sides' endeavour to achieve the joint strategic goals of GASGI and NEOM, including developing work practices to improve means of interoperability and integration of digital systems that benefit from the geospatial data available in the national geospatial platform; cooperating in

developing regulations, standards, and executive methodologies for geospatial specialized work to meet the needs of the supervisory scope in NEOM; and explore future opportunities for investment, business development, and innovation for the sector, stated the report.

The MoU stipulated benefiting from the services and products of the national network of continuous monitoring stations (KSA-CORS), the use of the National Spatial Reference (SANSRS) in all surveying work at NEOM, and the provision of support by GASGI to use or move to this reference and cooperation to facilitate the Authority's tasks in NEOM, including geodetic work, it added.

MATTERPORT BECOMES AUTODESK PREMIUM PARTNER, DEEPENING RELATIONSHIP ON DIGITAL TWIN COLLABORATION FOR DESIGN & CONSTRUCTION



Matterport, Inc, the leading digital twin platform to access, understand, and utilize properties announced its membership as an Autodesk Construction Cloud® Premium Partner, helping bring Matterport's 4K digital twins to even more construction professionals. Autodesk Construction Cloud is a portfolio of software services that combines advanced technology, a builder's network and predictive insights for construction teams.

Matterport has been part of the Autodesk Construction Cloud partner ecosystem since 2020, when it first introduced the Matterport Partner Card within BIM 360®. Since then, Matterport has introduced several new add-ons, features, and integrations to support design and construction professionals across their Autodesk® and Autodesk Construction Cloud workflows, becoming one of the most popular integrations available in the Autodesk App Store and Partner Card library.

Digital twins allow teams to collaborate virtually within the visual context of a job site. With a clear view of site conditions, teams can identify and communicate potential issues earlier to keep projects on time and on budget.

Today, Matterport users can collaborate across several Autodesk workflows, including:

Autodesk® Docs: Create, view, and collaborate on Issues directly within a Matterport digital twin of a project, or generate specific file types (.rvt, .ifc, .dwg, .xyz) from models to share with stakeholders.

Autodesk® Build: Easily create, assign, and track RFIs connected to a Matterport digital twin in Autodesk Build to pinpoint site problems and ensure project teams are on the same page.

Matterport Partner Card: Add the

Matterport Partner Card to your Autodesk Build Insights or BIM 360 Project Home dashboards to provide stakeholders with visual site context alongside essential project data.

Autodesk® Revit® Plugin: Streamline workflows by directly importing Matterport point cloud files (.XYZ and .E57) and BIM files (.rvt, .ifc) into Revit to kickstart 3D model creation.

As a Premium Partner, Matterport will collaborate closely with Autodesk on new APIs that help improve capabilities available to customers and on extensive go-to-market activities to help customers discover and take advantage of that value.

"Since Matterport began its journey into the design and construction space, Autodesk has been an invaluable partner in integrating the strengths of our immersive platform with Autodesk's decades of expertise," said Jay Remley, Chief Revenue Officer, Matterport. "We've been blown away by the positive reaction to our latest integration with Autodesk Construction Cloud, and as a Premium Partner, look forward to delivering even deeper integrations that can help anyone in the design and construction phases keep their projects moving, from wherever they are."

"Digital twins help the construction industry significantly address collaboration issues and information silos," said James Cook, director - industry & technology partnerships at Autodesk Construction Solutions. "Given that Matterport's technology helps democratize the reality capture, creation, and use of 3D digital twins, we're enthusiastic about how our partnership has grown. Matterport's addition as a Premium Partner translates into a lot of value for our mutual customers."

Photorealistic 3D Tiles from Google Maps Platform Now Included in Cesium ion



Cesium is excited to announce that photorealistic 3D Tiles from Google Maps Platform are now included with Cesium ion, the SaaS platform for tiling, combining, and streaming global-scale 3D data. As of today's General Availability release, these detailed, visually stunning cities are now production ready for use in your immersive 3D geospatial applications and experiences.

Sign up for a free Cesium ion account or simply log in to your existing account to start streaming to the web or your preferred creation engine, including CesiumJS, Unreal Engine, Unity, or NVIDIA Omniverse.

About Photorealistic 3D Tiles with Cesium ion:

Photorealistic 3D Tiles uses the Open Geospatial Consortium's 3D Tiles standard created by Cesium.

Use Cesium ion to combine your own 3D geospatial data with photorealistic 3D Tiles to build immersive metaverse experiences.

Photorealistic 3D Tiles are available in over 2,500 cities and 49 countries. Cesium ion with Photorealistic 3D Tiles gives developers access to an open ecosystem of 3D Tiles-enabled runtime software, including CesiumJS, Unreal Engine, Unity, and NVIDIA Omniverse.

Since the experimental release in May, users have leveraged Cesium and Photorealistic 3D Tiles to build immersive experiences for industries such as AEC, flight simulation, real estate, and more. Visit Cesium for more information and tutorials on building with Google's Photorealistic 3D Tiles with CesiumJS, Cesium for Unreal, Cesium for Unity, and Cesium for Omniverse.



Segway Robotics and NVIDIA Launch Nova Carter AMR, a Complete Robotics Development Platform

Nova Carter AMR, a complete robotics development platform that accelerates the development and deployment of next-generation Autonomous Mobile Robots (AMRs), developed by Segway-Ninebot and NVIDIA has been officially launched on the Segway-Ninebot official website.

The chassis that provides mobility for Nova Carter AMR comes from the flagship product RMP Lite 220 of Segway Robotics, and its software system including chips, algorithms, and sensors comes from NVIDIA. Segway Robotics is also responsible for the integration of the whole product.

Nova Carter AMR utilizes the NVIDIA AGX Orin for accelerated computing under robot Operating System (ROS) 2, offering a complete 360° perception from cameras and light detection and ranging (LiDAR). It also features high-performance computing modules, multiple sensors, powerful autonomous driving development software and tools, as well as a highly secure and reliable design, providing strong support for the development and implementation of autonomous driving technology.

In practical cases, the Nova Carter AMR can collect data for mapping test areas such as warehouses or



factories. The processed data can then be deployed to Carter for fully autonomous operations for specific use.

Segway Robotics is a robot brand under Segway-Ninebot, with commercial delivery robots and robot mobile platforms. RMP Lite 220 is one of the robot mobile platform of Segway Robotics, mainly targeting enterprises and third-party developers, providing an

integrated robot chassis solution for secondary development or customized services. To date, Segway Robotics has independently developed multiple forms of RMP products, including Lite 220, Pro 401, Plus 401, Smart 260, etc., which can meet the diverse needs in different scenarios such as indoor and outdoor delivery, warehousing and logistics AGV, inspection, and cleaning.

Reconstruct Delivers 3D Walkthroughs with Digital Twin

Reconstruct released a new feature: Project Snapshot. With Project Snapshot, stakeholders can rapidly share key visuals of a construction site with anyone, anywhere. Reconstruct users simply curate a 3D walkthrough of their building or infrastructure, then send a link to the tour. All recipients have to do is click a button, and they're immersed in the job site—no powerful computer, technical training, or even logging in required.

The feature allows users to pre-select project areas, pin them to a carousel of images, and then guide viewers through a guided walkthrough of those scenes. Users can “walk” the site as planned by the tour curator, then pause at their leisure to inspect site details in 2D or 3D.

Project Snapshot empowers general contractors to keep owners and owners' representatives apprised and aligned on construction progress, and also helps



these contractors provide trades with crucial details for design work and bids at scale.

Additionally, Project Snapshot can be used to foster swifter, more focused coordination meetings. It's the fastest, simplest way to update stakeholders on the current status of a project, align all teams quickly and intelligently, and then let those teams get back to work.

“When talking to users, we consistently received the same message,” said Dan Prochazka, Head of Product at Reconstruct. “They wanted a super simple

way to share project statuses without training people to use a new tool or managing additional accounts. Users wanted a one-click solution for sharing the current conditions of a job site without worrying about their audiences' hardware or technical skills, and Project Snapshot does just that.”

Reconstruct is the leader in digital twin technology for construction, inspection, and engineering. Its reality mapping engine allows anyone on the job site to perform geo-referenced reality capture using any device, including a smartphone, 360 camera, or drone.

Reconstruct then blends all footage to create a single source of project truth automatically pinned in space and over time. The resultant 3D reality maps and 2D floorplans can be used for site surveys, remote quality assurance and quality control, facility condition assessments, physical asset inspections, remote progress monitoring, online as-builts, and more.

Amazon is launching ultra-fast drone deliveries in Italy, the UK, and a third location in the U.S.

Amazon customers in Italy, the UK, and an additional U.S. city will soon have the option to get their packages delivered by a drone beginning in late 2024. The Prime Air drone delivery system is expanding to international locations, and adding a third city in the United States by the end of next year— specific cities in the U.S. and abroad will be named in the coming months. The new locations add to our existing drone delivery operations in the U.S., where we've been using drones to safely deliver packages weighing up to five pounds in one hour or less, for almost a year.

Working with policymakers

Amazon has been working closely with regulators and governments around the world to expand drone delivery. Here's what they have to say about the exciting expansion of our program in Italy and the UK:

"The future has arrived in Italy. Being chosen by a global player such as Amazon is further confirmation of the strategy pursued by ENAC (the National Civil Aviation Authority), to push for innovation of advanced air mobility in the aviation industry, creating a national ecosystem favorable to the safe development of new services. Italy's experience will be an inspiration and support for safe operations in the rest of Europe," said Pierluigi Di Palma, President of ENAC.

"For some time, the Italian Air Navigation Service Provider (ENAV) has looked beyond air traffic control, to the management of airspace as infrastructure available for the economic growth of the country. We support projects such as Amazon's drone delivery,



and we are aware of our role not only as a service provider but as a true strategic industrial partner," said Pasqualino Monti, CEO of ENAV, the Italian Air Navigation Service Provider.

"Exploring the options of how drones can be safely and successfully incorporated into more of the UK's airspace is key. It is vital that projects such as this take place to feed into the overall knowledge and experiences that will soon enable drones to be operating beyond the line of sight of their pilot on a day-to-day basis, while also still allowing safe and equitable use of the air by other users," said Frederic

Laugere, Head of Innovation Advisory Services at the UK Civil Aviation Authority.

"Amazon's announcement today is a fantastic example of Government and industry coming together to achieve our shared vision for commercial drones to be commonplace in the UK by 2030. Not only will this help boost the economy, offering consumers even more choice while helping keep the environment clean with zero emission technology, but it will also build our understanding how to best use the new technology safely and securely," said Aviation Minister Baroness Vere.

Deliverone and Rigitech complete night BVLOS routes in northern France

Drone operator Deliverone collaborated with Rigitech to complete Beyond Visual Line of Sight (BVLOS) drone operations in northern France. Utilising the Rigitech's Eiger platform, the partners aim to establish an efficient and secure network for transporting critical medical supplies between clinics and hospitals during nighttime aeronautic hours. Rigitech proprietary software RigiCloud provides detailed route planning, smart navigation, integrated Detect and Avoid systems, and



contingency measures.

Delivrone recently began flying two routes from Valenciennes to Maubeuge, connecting a local clinic and the Maubeuge Central Hospital to Valenciennes, traversing a distance of 39 km in approximately 25 minutes.

One of the key challenges in healthcare logistics is the transportation of biological samples, which require precise temperature control, real-time tracking, and an unbroken chain of custody.

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