**1 . Date: 27-01-2023Cargo - MALE - Contract - Natilus, Ameriflight Sign Accord For 20 Cargo Feeder UAVsURL: https://www.asdnews.com/news/aerospace/2023/01/27/natilus-ameriflight-sign-accord-20-cargo-feeder-uavs**

Natilus has signed a conditional purchase agreement with Ameriflight for 20 of its uncrewed regional freighters, marking the first sale of its blended-wing-body (BWB) Kona aircraft to a U.S.-based customer.

As the largest U.S.-based Part 135 operator, Ameriflight ships high-priority freight to and from remote areas across the U.S. on behalf of overnight express carriers like FedEx and UPS. The Dallas-based carrier’s freight services mostly consist of 1-to-2-hr. feeder flights using small aircraft like the Embraer EMB-120, Beechcraft 1900C and Fairchild Swearingen Metroliner. They are all aging platforms ripe for replacement by a more efficient aircraft like the Kona, Natilus CEO Aleksey Matyushev says.

“The way this aircraft was designed is to fly these sort of short-hopper feeder flights of around one to two hours, which is perfect for Ameriflight, although we can go up to six-and-a-half hours flight time,” Matyushev says. “This platform is meant to be a kind of replacement for their fleet, but still introducing new technology like autonomy and the blended wing.”

**2 . Date: 29-03-2023Cargo - Small - Partnership - EHang and CATEC Successfully Complete ICEX's BAUD Project in SpainURL: https://www.asdnews.com/news/aerospace/2023/03/29/ehang-catec-successfully-complete-icexs-baud-project-spain**

EHang Holdings Limited (Nasdaq: EH) (“EHang” or the “Company”), the world’s leading Autonomous Aerial Vehicle (“AAV”) technology platform company, announced that it has collaborated with Spain’s Advanced Center for Aerospace Technologies (“CATEC”) to successfully complete the BAUD project in Spain. Framed under the Invest in Spain program of ICEX Trade and Investment, and sponsored by the Spanish Ministry of Industry, Trade and Tourism, the BAUD project aims at enhancing the operational safety and efficiency of Unmanned Aerial Systems (“UAS”) for aerial logistic missions, as well as enabling their integration in U-Space.

After one year of intense industrial research, EHang and CATEC achieved the project objectives through the development of an autonomous airborne beacon, which provides more precise and comprehensive UAS positioning by using Global Navigation Satellite Systems, EGNOS (European Geostationary Navigation Overlay Service) and Galileo, along with providing the UAS status, remote e-ID (electronic identification) and other tactical information with U-Space systems.

The flight test campaign of the BAUD project was conducted at CATEC’s Air Traffic Laboratory for Advanced Unmanned Systems (“ATLAS”) test flight center, using two EHang Falcon B (Logistics) autonomous aerial vehicles. The developed autonomous airborne beacon can not only be applied by EHang AAVs, but also by any UAS, and will enable the safe operation of UAS in European airspace, through their intelligent integration with U-Space systems.

Victoria Xiang, COO of EHang Europe and Latin America, highlighted, “We are delighted to announce the successful completion of the BAUD project, achieving all of its goals and objectives. EHang welcomes public-private partnership opportunities for research, development, and investment in the UAS field in Spain. This has encouraged EHang to execute several innovation projects, share EHang’s world-leading technology and extensive international experience on Urban Air Mobility, and strengthen our wide technological collaboration network in Europe”

**3 . Date: 19-04-2023Research - N/A - General - PlatformSuccessful Flight of Natilus Kona Prototype Validates Performance of Unique Blended Wing Body DesignURL: https://www.asdnews.com/news/aerospace/2023/04/19/successful-flight-natilus-kona-prototype-validates-performance-unique-blended-wing-body-design**

Paving the Way for Completion of Full-Scale Autonomous Cargo Drone

Key Points:

Natilus successfully flies Kona sub-scale prototype, validating performance of the company’s unique blended wing body design.

Kona flight paves the way for completion of a full-scale autonomous cargo drone.

Natilus recently completed both vertical tails for its full-scale prototype, and announced the upcoming acquisition of propellers from Hartzell, gearing up for the manufacture of the engine test stand.

Natilus advanced autopilot code will allow air freight operators to scale their operations without compromising safety or efficiency.

To overcome the challenges of pilot shortages, Natilus is spearheading the development of innovative remote piloting technology. The Kona prototype plays a crucial role in integrating Natilus’ autopilot code into the full-scale demonstrator.

Natilus has announced purchase commitments for the delivery of over 460 Natilus aircraft, amounting to $6.8 billion in total to date.

Natilus, an innovative company producing a fleet of highly cost-efficient autonomous cargo aircraft, has successfully completed multiple flights of the subscale prototype of its Kona regional aircraft. The flight tests mark a significant milestone for Natilus and for the autonomous cargo aircraft industry by validating wind tunnel tests conducted over three years, testing the aerodynamic performance of the Natilus unique blended-wing-body (BWB) aircraft design.

The subscale prototype of the Kona aircraft took off from a private runway in Southern California and reached speeds of 70 mph. One of the key challenges with the BWB design has been stability – and the test flights validated that the Natilus configuration can fly without the help of a complex autopilot system.

“We are fully focused on completing the full-scale Kona prototype” stated Aleksey Matyushev, Natilus Co-Founder and CEO. “Our Kona remotely piloted aircraft will be capable of carrying over 9,000 pounds (4.3 metric tons) of freight and will open new markets worldwide. The progress of Natilus developing autonomous cargo aircraft is a game-changer in the logistics industry, providing an efficient and cost-effective solution for shipping goods across oceans.”

Natilus has also recently completed the full-scale prototypes of both vertical tails, validating the aggressive timetables to 1st flight. The company will receive Hartzell propellers in May, gearing up for the manufacture of the engine test stand.

Natilus is spearheading the air freight industry’s efforts to overcome the challenges brought about by the current shortage of pilots and has prioritized the development of innovative remote piloting technology, with the Kona prototype serving as a key component in correlating their own autopilot code for the full-scale demonstrator. This innovative approach will allow air freight operators to scale their operations without compromising safety or efficiency.

**4 . Date: 14-07-2023Cargo - Regulation - Dronamics Becomes the World's 1st Cargo Drone Airline with IATA and ICAO Designator CodesURL: https://www.asdnews.com/news/aerospace/2023/07/14/dronamics-becomes-worlds-1st-cargo-drone-airline-with-iata-icao-designator-codes**

Dronamics, the world's first cargo drone airline with a license to operate in Europe, announced today it has been officially assigned both IATA and ICAO designator codes. Dronamics is the first cargo drone airline to secure these codes, granting it recognition on par with other international airlines.

Dronamics has been assigned the IATA designator code "OY," along with the accounting prefix "651." IATA codes play a critical role in the aviation industry, serving as essential identifiers for airlines, their destinations, and cargo documents. These codes enable Dronamics to be officially recognized as an airline entity, supporting commercial interline agreements with other IATA carriers, facilitating connections with freight forwarders, and enabling the publication of flight schedules through OAG, the world's leading provider of digital flight information. The IATA 2-letter Airline Designator code "OY" will be used to establish flight numbers for both scheduled and non-scheduled flights, providing standardized identification across its operations. Additionally, the Airline Accounting Prefix "651" grants Dronamics the ability to issue Air Waybills (AWBs), facilitating seamless cargo uplift within its extensive network.

In addition to the IATA codes, Dronamics has also secured the ICAO designator codes, further solidifying its presence in the global aviation community. The ICAO telephony call sign "Black Swan" and the 3-letter airline designator "DXE" have been assigned to Dronamics. These ICAO codes are widely utilized by pilots and air traffic controllers worldwide, playing a crucial role in flight planning, communication with air traffic control, and the dissemination of vital information through NOTAMs (Notice to Air Missions).

"Becoming the first cargo drone airline with both IATA and ICAO designator codes is a testament to Dronamics' pioneering spirit and our vision for faster, cheaper and green air cargo for everyone, everywhere. This recognition by the leading aviation community reinforces our position on the international aviation map.” Svilen Rangelov, co-Founder and CEO of Dronamics

By securing the IATA and ICAO designator codes, Dronamics has solidified its position as the world's first cargo drone airline. This reinforces Dronamics' commitment to innovating air cargo with its drone technology and opens up new avenues for collaboration, growth, and integration within the global aviation ecosystem.

**5 . Date: 21-07-2023Solar ISR / ISTAR - HALE - General - PlatformMira Aerospace, A JV of UAVOS and Bayanat, Successfully Completed ApusDuo Solar Aircraft Test FlightURL: https://www.asdnews.com/news/aerospace/2023/07/21/mira-aerospace-jv-uavos-bayanat-successfully-completed-apusduo-solar-aircraft-test-flight**

Mira Aerospace, a joint venture of UAVOS, a developer and manufacturer of advanced unmanned systems, and Bayanat, a part of the Abu Dhabi-based G42, announced a successful test flight of the ApusDuo solar-powered high-altitude pseudo satellite (HAPS). The flight took place on June 8, 2023 at the Huye aerodrome, the Republic of Rwanda. With all basic aircraft tests for the ApusDuo HAPS now complete, Mira Aerospace will proceed with preparations for stratospheric test flights.

During this test flight the ApusDuo UAS reached altitudes of 16,686 m HMSL (height above mean sea level) and touched down at the departure runway in 10 hours and 30 min after takeoff. The ApusDuo HAPS successfully achieved a scope of test points, including flight stability check and controllability with a payload of 3,6 kg installed at high altitudes and C2 link performance evaluation (the communications link between a UAV and its ground station).

The UAVOS-designed avionics system demonstrated stable performance in extreme temperatures of minus 68 degrees centigrade. The UAVOS avionics system serves as the brain of the ApusDuo unmanned aircraft ensuring safe Beyond Visual Line of Sight (BVLOS) flight profiles throughout the various phases of lift-off, ascent and landing.

“We’re extremely pleased about the successful completion of the next test range,” said Vadim Tarasov, Board Member, Mira Aerospace. “Based on our experience and learnings from these tests, we feel there are even greater possibilities for the HAPS business. The Mira Aerospace team will continue to work toward our ultimate goal of bridging the world’s digital divide and revolutionizing mobile connectivity by leveraging the HAPS platform.”

The HAPS program was established to fast-track the development and adoption of HAPS technology to support high altitude missions. The missions include providing a wide range of applications in Connectivity, Earth observation, Weather, Security, Natural Resources and Emergency Disaster management.

HAPS refers to systems where unmanned aircraft flying in the stratosphere can be operated like telecommunication base stations to deliver connectivity across wide areas. Since HAPS can provide stable telecommunications networks without being affected by situations on the ground, the technology is also expected to help assist rescue and recovery efforts during times of disasters.

**6 . Date: 31-08-2023ISR / ISTAR - Small - General - SoftwareShield AI Demonstrates AI-Piloted, Teaming V-BATs with AFWERX; Transformational Capability to Be Fielded in 2024URL: https://www.asdnews.com/news/aerospace/2023/08/31/shield-ai-demonstrates-aipiloted-teaming-vbats-with-afwerx-transformational-capability-be-fielded-2024**

Shield AI, a defense technology company building the world’s best AI pilot, today announced the successful completion of an autonomous teaming demonstration featuring three V-BAT Unmanned Aircraft Systems (UAS). This accomplishment was the final milestone of an AFWERX autonomy effort under their Strategic Funding Increase (STRATFI) program and collaboration with the AFRL Sensors Directorate.

Shield AI showcased its Hivemind AI pilot by launching a team of three V-BATs to monitor and surveil simulated wildfires. The multi-agent, coordinated team conducted Detect, Identify, Locate, and Report (DILR) missions in a contingency scenario with dual-use applications. This work with AFWERX sets Shield AI on a path to deploy V-BAT teaming capabilities in GPS- and- communications-denied environments in the next year.

“Intelligent, affordable mass that can see everything on the battlefield, execute the mission even when GPS and comms are denied or degraded, and put all our adversaries’ military assets at risk at all times is the holy grail of deterrence. This milestone brings us closer to achieving that reality,” said Brandon Tseng, Shield AI’s President, Co-founder and former U.S. Navy SEAL. “We had many customers from across the DoD enterprise attend the event and my favorite customer quote was ‘Wait, you’re flying those three aircraft, doing the recon, and at the same time briefing us?!’ The customers genuinely appreciated that this isn’t merely talk, or just computer simulations, or a science project leading nowhere. This represents real autonomy on actual aircraft that, most importantly, will be deployed imminently.”

Hivemind can be trained for a variety of missions and its modular open systems architecture enables portability to other aircraft. It has flown quadcopters, V-BATs, and jet aircraft. Hivemind can be trained to undertake a broad range of missions, including integrated air defense breach, SCUD missile hunting, zone reconnaissance, counter-air, beyond-visual-range strike, maritime domain awareness, and communications-contested operations.

“Autonomy on V-BAT directly supports our autonomy efforts on uncrewed jet aircraft. Beyond our autonomy stack being leveraged across different aircraft, what sets this autonomy effort apart from others is that it was deployed on a program-of-record aircraft and will be a fielded capability next year. Many DoD-funded efforts, unfortunately, never reach the hands of a warfighter. However, Shield AI and AFWERX decided from the start that we would field this capability within the DoD. The great thing is all our DoD customers — the Army, the Navy, the Marines, SOCOM, and the Air Force — will benefit from this AFWERX effort. Autonomy is a joint capability,” said Ryan Tseng, CEO and Co-founder of Shield AI.

“What’s exciting to us is not just the capability that teaming V-BATs can bring to the table or how it’s on a great path for fielding with DoD partners, but how autonomy stacks can be leveraged across different aircraft and programs. The continual application of autonomy from small systems, now V-BAT, and onto larger platforms provides paths for industry progression and autonomy maturation. The criticality of autonomous capabilities for future programs of record within the DoD was the driver for this Shield AI – AFWERX effort,” said Col. Tom Meagher, AFWERX Prime Division Chief.

**7 . Date: 07-09-2023Acquisition - Acquisition Expands Anduril's Suite of Autonomous Capabilities Into the Group 5 Autonomous Aircraft SpaceURL: https://www.asdnews.com/news/aerospace/2023/09/07/acquisition-expands-andurils-suite-autonomous-capabilities-into-group-5-autonomous-aircraft-space**

Defense technology company Anduril Industries today announced its acquisition of Blue Force Technologies, a developer of autonomous aircraft with an integrated aerostructures division serving a wide range of defense and commercial customers. This transaction will expand Anduril’s existing autonomous fleet to now include large high performance, group 5 aircraft and significantly increases Anduril’s reach and impact within the Department of Defense. Terms of the deal were not disclosed.

Blue Force Technologies designs and manufactures high-end composite aircraft and their components at its factories in North Carolina. Blue Force Technologies has been developing Fury, a group 5 autonomous air vehicle with fighter-like performance since 2019. Fury leverages proprietary rapid prototyping, digital engineering and an open architecture that is designed to deliver next-generation flight performance with the flexibility to integrate heterogenous sensors and payloads to support air dominance missions. Recently, the company successfully completed a flight test of the flight software on board a VISTA, Variable Stability In-flight Simulator Test Aircraft, and a ground test for Fury’s novel carbon fiber composite propulsion flowpath system.

Anduril is making significant investments to continue the development of the Fury autonomous air vehicle, expand manufacturing operations in North Carolina and accelerate development of technologies critical to future capabilities such as autonomous collaborative platforms. As a nontraditional company that uses its own capital for research and development, Anduril moves fast to engineer, prototype, develop and produce new capabilities for the Department of Defense.

These new capabilities are critical to maintaining deterrence in an era of strategic competition. To project force, deter aggression, and regain affordable mass, the DoD will need to rely on large quantities of smaller, lower-cost, more autonomous systems. The U.S. Air Force, U.S. Navy and U.S. Marine Corps have all signaled their intention to modernize and adopt advanced autonomous capabilities. This ecosystem of autonomous systems must be powered by software that enables a single operator to control multiple assets to accomplish a wide range of missions.

This acquisition follows Anduril’s successful launch of Lattice for Mission Autonomy earlier this year, the artificial intelligence-enabled software platform that enables teams of autonomous systems to dynamically collaborate to achieve complex missions, under human supervision. By investing in both hardware and software capabilities, Anduril will further accelerate the development of autonomous operations like manned-unmanned teaming and other critical advanced autonomous solutions for warfighters around the world.

Anduril is a proven leader in developing and fielding integrated autonomous solutions across a wide variety of sensors, effectors and assets across domains. Anduril has experience automating the operations of hundreds of robotic systems deployed in tactical environments around the world. Its objective is to support Department of Defense and allied militaries services in fielding autonomous and artificially intelligent systems as fast as possible.

**8 . Date: 16-10-2023Cargo - Partnership - Emirates Post Group Signs LoI With Dronamics to Explore Implementing Cargo Drone DeliveriesURL: https://www.asdnews.com/news/aerospace/2023/10/16/emirates-post-group-signs-loi-with-dronamics-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.

**9 . Date: 16-11-2023Cargo - Partnership - Dronamics and Aramex to Partner on Cargo Drone Deliveries GloballyURL: https://www.asdnews.com/news/aerospace/2023/11/16/dronamics-aramex-partner-cargo-drone-deliveries-globally**

Dronamics, the world's first cargo drone airline and Aramex (DFM: ARMX) have announced a LOI (Letter of Intent) agreement for cargo drone flights leveraging Dronamics' technology and Aramex's fleet management capabilities.

Dronamics, renowned for engineering and operating remotely-piloted cargo aircraft, will supply its innovative drone technology to Aramex to enable same-day middle-mile and long-range deliveries. Aramex, one of the largest companies in the logistics sector globally, headquartered in UAE and listed on the Dubai Financial Market, was founded in 1982 and moves 100 million parcels annually.

Sharing a common vision of the cargo drone delivery market, Dronamics and Aramex will explore joint deployment opportunities in the United Arab Emirates initially, followed by other key markets including South Africa and Australia.

This partnership, facilitated by the Strategic Development Fund (SDF) as a strategic investor in Dronamics, will see Aramex, known for setting the standard in express logistics and transportation, offer the innovative cargo drone solution developed and operated by Dronamics, at a larger scale. Dronamics can offer up to 80% faster, 50% cheaper and 60% lower in CO2 emissions freight compared to traditional transport services, making it well suited to express deliveries, a sector Aramex is known for. Its remotely-piloted aircraft, the Black Swan, requires 400 meters only to land and take off, a viable solution for reaching remote and underserved areas, where traditional airport infrastructure is missing or underdeveloped.

"We're excited to collaborate with Aramex, integrating Dronamics' cargo drone technology to bring the transformative benefits of rapid, cost-effective, and sustainable same-day delivery to the global stage," Svilen Rangelov, Co-Founder and CEO of Dronamics

"We are delighted to partner with Dronamics to explore their cargo drone capabilities within our operations. This aligns well with our continuing efforts towards harnessing innovation for enhanced operational efficiency, providing an exceptional customer experience, and minimizing our carbon footprint across the UAE and our global operations. Alaa Saoudi, Aramex Chief Operating Officer - Express Management

"This partnership with Dronamics adds a new element to our Future vehicle program. We hope to pilot flights with Dronamics in 2024 partnering with the broader ecosystem of regulators and enablers" Angad Singh, Aramex Global Innovation Director

**10 . Date: 16-05-2024Component - General - Detect & AvoidEchodyne EchoFlight Radar Integrated Into AATI's Newly FAA-Approved BVLOS Unmanned AircraftURL: https://www.asdnews.com/news/aerospace/2024/05/16/echodyne-echoflight-radar-integrated-into-aatis-newly-faaapproved-bvlos-unmanned-aircraft**

Echodyne MESA radar technology integral to first-of-its-kind FAA Approval of AATI's AiRanger for BVLOS flight

Echodyne, the radar platform company, is pleased to announce its EchoFlight radar is integrated into the American Aerospace Technologies, Inc. (AATI) AiRanger aircraft, which obtained a waiver from the Federal Aviation Administration (FAA) last week for commercial Beyond Visual Line-of-Sight (BVLOS) flight operations. The waiver permits AATI to use the onboard detect-and-avoid (DAA) system for adhering to aircraft right-of-way rules during BVLOS operations, making the AiRanger the first unmanned aircraft system (UAS) to meet industry consensus standards for the DAA system.

This approval marks a major milestone for the unmanned aviation industry as a whole and is the culmination of concerted efforts over many years from a diverse array of technology partners and regulatory bodies to safely bring a next-generation, first-of-kind BVLOS aircraft into commercial operation. The level of rigor and evaluation for such a feat is not to be understated, as this process required regulatory agencies to review new, emerging technologies that had never come into their assessment purview before.

In addition, the complex and cutting-edge aviation navigation technologies underpinning the AiRanger aircraft had not previously been integrated into one, singular system. The scale of the achievement is highlighted by how the AiRanger is able to rely on such advanced technologies to assist with remotely piloted concepts of operation (ConOps) across the full spectrum – human on the loop, human in the loop (semi-autonomous), and human out of the loop (fully autonomous).

“With the granting of the FAA waiver, it showcases how this entire process has been truly a multi-party collaborative endeavor and AATI is grateful to Echodyne for their steadfast and exceptional support throughout the multi-year effort,” said David Yoel, CEO at American Aerospace Technologies, Inc.

“Echodyne’s EchoFlight radar provides unparalleled data fidelity and precision, and this first-of-its-kind waiver is evidence of radar's role in providing the situational awareness necessary for successful detect-and-avoid systems.”

The FAA approval allows AATI’s AiRanger – a 220-pound aircraft capable of flying for 12 hours and up to 750 miles at altitudes to 12,000’ MSL – to conduct commercial operations at medium altitudes under Visual Flight Rules (VFR) beyond the pilot’s line of sight and without airborne or ground observers. The AiRanger’s initial deployment will be for critical infrastructure patrol, threat detection and reporting, focusing on pipeline surveillance. The operation is vital for maintaining pipeline integrity and safety, and ensuring quick response to potential hazards or leaks.

While many stakeholders had to come together to drive this innovation to market, the achievement underscores the essential role that radar plays in the commercialization of such aircraft operations – providing foundational situational awareness data to search, detect, and track volumes of airspace for both cooperative and non-cooperative aircraft. EchoFlight is integrated into a pod on each wing of the AiRanger aircraft, providing the necessary visibility to meet minimum operational performance standards (MOPS). The detection and tracking ranges provided by EchoFlight provide the DAA system with sufficient time and information to take avoidance measures and maintain operational safety.

“As all stakeholders in the unmanned aviation industry are aware, it takes a village to develop such a complex aviation navigation system that receives regulatory approval,” said Eben Frankenberg, CEO at Echodyne. “The integration of our EchoFlight radar into the AiRanger is one critical piece of many in the puzzle to create the safety case for BVLOS flight operation. We're ecstatic to share in this milestone industry moment and are proud to see the value of radar realized in the commercialization of BVLOS operations.”

**11 . Date: 30-05-2024Armed ISR / ISTAR - Tactical - General - PlatformAV to Develop its Wildcat Autonomous Vtol UAS for Darpa's Ancillary ProgramURL: https://www.asdnews.com/news/aerospace/2024/05/30/av-develop-its-wildcat-autonomous-vtol-uas-darpas-ancillary-program**

AeroVironment (AV) was down selected by the Defense Advanced Research Projects Agency (DARPA) for continued development of its X-Plane design for the agency’s AdvaNced airCraft Infrastructure-Less Launch And RecoverY (ANCILLARY) program. AV’s offering – Wildcat – is a Group 3 vertical take-off and landing (VTOL) uncrewed aircraft system (UAS) developed specifically to execute ship-based operations in challenging maritime environments.

“We have prioritized controllability to ensure Wildcat meets the ‘anytime, anywhere’ goal of DARPA’s ANCILLARY program,” said AV’s Vice President of MacCready Works Chris Fisher. “Wildcat leans on autonomy to reduce operational burdens while enabling safe, infrastructure-less launch and recovery in challenging conditions from a range of Navy ships.”

Wildcat leverages AV’s SPOTR-Edge machine learning-enabled computer vision to enhance mission effectiveness. This capability builds on operational learnings AV has gained as a leader in the Group 1 to 3 UAS space with millions of operational flight hours on its Raven®, Puma™ AE, and JUMP® 20 uncrewed systems.

ANCILLARY calls for the development of a low-weight, large-payload, long-endurance VTOL UAS for missions executed by the U.S. Navy and Marines. AV’s Wildcat pushes beyond current Group 3 UAS offerings and provides expanded mission capabilities to address and overcome evolving threat landscapes.

Designed specifically for the ANCILLARY program, Wildcat meets DARPA’s objectives for a 450 nautical mile (nmi) mission radius and over 12 hours of endurance on station with 60 lbs of payload. Additionally, Wildcat exceeds program objectives for sea state recovery and cruise speed, with the ability to operate in high sea states and winds, and dash over 100 knots to quickly cover long distances over sea or land.

Wildcat’s large modular payload capacity will enhance mission responsiveness and flexibility, and its tail-sitter design requires fractional infrastructure and footprint compared to other offerings. It is designed to operate as part of a larger fleet of Wildcat UAS that leverage collision-avoidance and autonomy to deconflict airspace and collaborate to perform search missions in degraded or denied airspace.

“Our solutions are specifically crafted for the operator and Wildcat is no exception. AV has a strong history of seamlessly integrating our systems into a soldier’s daily operations and we look forward to further developing this design in partnership with DARPA and the Office of Naval Research for the ANCILLARY program,” continued Fisher.

**12 . Date: 11-06-2024Cargo - Small - General - UAVOS Demonstrated Healthcare Drone Delivery CapabilityURL: https://www.asdnews.com/news/aerospace/2024/06/11/uavos-demonstrated-healthcare-drone-delivery-capability**

UAVOS is pleased to announce that it has successfully demonstrated multiple applications for health-care related drone delivery services. Deliveries have been conducted using the UVH 170 unmanned helicopter with a 10 kg external payload. The demonstration served as an important starting point to illustrate the feasibility and impact of BVLOS medical drone deliveries. These enhance speed, connectivity, and safety in the delivery of supplies to remote and hard-to-reach areas. UAVOS has also successfully demonstrated the ability to transport temperature-controlled medical supplies tests.

Taking off from the delivery point, a 10 kg payload consisting of medical samples was flown to a drop-off point in a hard-to-reach area. Covering a distance of 35 km, the unmanned helicopter completed the mission within 30 minutes.

The helicopter carried an external load and was fitted with the UAVOS' payload drop system with a sling and a hook. The UAVOS-designed payload drop system allowed a package to be loaded at the point of origin, fly to a destination, hover at a lowered altitude of 20 meters, release the load by setting a payload down carefully on the ground, and return to the point of origin.

The UVH 170 UAS has a lifting capability of 15 kg of payload, a travel range of 350 km, and an operating speed of 60 km/h. The payload box is designed to carry approximately 0,018 cubic meters of cargo.

**13 . Date: 04-01-2023Partnership - GA-ASI Announces Strategic Partnership with Bharat Forge to Manufacture AerostructuresURL: https://www.asdnews.com/news/defense/2023/01/04/gaasi-announces-strategic-partnership-with-bharat-forge-manufacture-aerostructures**

In a major move to boost manufacturing in India, General Atomics Aeronautical Systems, Inc. (GA-ASI) and Bharat Forge Limited, India have announced a partnership to manufacture main landing gear components, subassemblies, and assemblies of remotely piloted aircraft. Part of the Kalyani Group, Bharat Forge is the largest repository of metallurgical know-how, design and engineering expertise, and manufacturing prowess in India. With over five decades of experience in manufacturing a wide range of high-performance, critical safety components, Bharat Forge offers full-service supply capability from concept to product design, engineering, manufacturing, testing, and validation.

“GA-ASI is eagerly looking forward to working with Bharat Forge in the critical field of aerostructure manufacturing,” said Dr. Vivek Lall, Chief Executive, General Atomics Global Corporation. “Bharat Forge’s expertise in the field of forging is known globally, and their outstanding contributions in the aerospace sector has inspired us to work together for building the next generation of the world’s most advanced unmanned aerial vehicles.”

Mr. Baba Kalyani, Chairman and Managing Director, Bharat Forge Limited, said, “Aerospace is a high ‘Technology Intensive’ domain, which relies on Product Integrity, Reliability, and Zero Defect.’ This is a culture by itself and demands a strong focus on people and processes. As part of our Aerospace Growth Strategy, our collaboration with GA-ASI is a strong testimony of our culture in Bharat Forge Aerospace to assimilate and demonstrate the same, as partners to General Atomics, in making India Atmanirbhar.”

Bharat Forge Limited has a state-of-the-art, digitally integrated manufacturing, assembly, and testing facility for aerospace components and systems. It manufactures structural and engine parts and subsystems for aircraft and engines for both civil and military applications. Its impressive portfolio includes aircraft turbine and compressor manufacturing; high-end aero engine components like blades, discs, and shafts; and airframe components, including aircraft landing gear, in keeping with the latest technology and design trends, while maintaining high quality standards.

GA-ASI is confident that its collaboration with Bharat Forge will result in significant capability-building for both companies and provide an impetus to the Indian large, unmanned aircraft industry.

**14 . Date: 11-01-2023General - DatalinkAirbus and VDL Group Join Forces to Produce an Airborne Laser Communication TerminalURL: https://www.asdnews.com/news/defense/2023/01/11/airbus-vdl-group-join-forces-produce-airborne-laser-communication-terminal**

Airbus and VDL Group have signed a partnership agreement for the development and manufacturing of a laser communication terminal for aircraft, known as UltraAir. Based on the development led by Airbus and the Netherlands Organisation for Applied Scientific Research (TNO), the two companies will now prepare a demonstration of a prototype and a first flight test in 2024.

As of 2024, Airbus and VDL Group – a Dutch high-tech industrial supplier – will further industrialise the prototype in order to make it ready for integration with a hosting aircraft. VDL brings design for production to the partnership and will manufacture critical systems. A flight test of this industrialised prototype is planned in 2025 on an aircraft.

UltraAir will enable the exchange of large amounts of data using laser beams in a network of ground stations and satellites in geostationary orbit at 36,000 km above the Earth. With unparalleled technology including a highly stable and precise optical mechatronic system, this laser terminal will pave the way for data transmission rates that could reach several gigabits-per-second while providing anti-jamming and low probability of interception.

In this way, UltraAir will allow military aircraft and UAVs (Unmanned Aerial Vehicles) to connect within a multi-domain combat cloud thanks to laser-based satellite constellations such as Airbus’ SpaceDataHighway. This is a key milestone in the roadmap of Airbus’ overall strategy to drive laser communications further, which will bring forward the benefits of this technology as a key differentiator for providing multi-domain combat collaboration for government and defence customers. In the longer term, UltraAir could also be implemented on commercial aircraft to allow airline passengers to establish high-speed data connections.

Regarded as the solution for data traffic in the quantum age, laser communication technologies are the next revolution in satellite communications (satcom). As satellite bandwidth demand is growing, the traditional satcom radio-frequency bands are experiencing bottlenecks. Laser communication brings 1,000 times more data, 10 times faster than the current network. Laser links also have the benefit of avoiding interference and detection, as compared to already-crowded radio frequencies they are extremely difficult to intercept due to a much narrower beam. Thus, laser terminals can be lighter, consume less power and offer even better security than radio.

Co-financed by Airbus and VDL Group, the UltraAir project is also supported by the ESA ScyLight (Secure and Laser Communication Technology) programme and by the “NxtGen Hightech” programme, as part of the Dutch Growth Fund, led by TNO and a large group of Dutch companies.

**15 . Date: 19-01-2023Research - HALE - General - PlatformDARPA Selects Aurora Flight Sciences for Phase 2 of Active Flow Control X-PlaneURL: https://www.asdnews.com/news/defense/2023/01/19/darpa-selects-aurora-flight-sciences-phase-2-active-flow-control-xplane**

Goal is to develop and fly a demonstrator aircraft without using external mechanical flight controls

DARPA has selected Aurora Flight Sciences to move into the detailed design phase of the Control of Revolutionary Aircraft with Novel Effectors (CRANE) program. This follows successful completion of the project’s Phase 1 preliminary design, which resulted in an innovative testbed aircraft that used active flow control (AFC) to generate control forces in a wind tunnel test. Phase 2 will focus on detailed design and development of flight software and controls, culminating in a critical design review of an X-plane demonstrator that can fly without traditional moving flight controls on the exterior of the wings and tail.

The contract includes a Phase 3 option in which DARPA intends to fly a 7,000-pound X-plane that addresses the two primary technical hurdles of incorporation of AFC into a full-scale aircraft and reliance on it for controlled flight. Unique features of the demonstrator aircraft will include modular wing configurations that enable future integration of advanced technologies for flight testing either by DARPA or potential transition partners.

“Over the past several decades, the active flow control community has made significant advancements that enable the integration of active flow control technologies into advanced aircraft. We are confident about completing the design and flight test of a demonstration aircraft with AFC as the primary design consideration,” said the CRANE Program Manager Richard Wlezien. “With a modular wing section and modular AFC effectors, the CRANE X-plane has the potential to live on as a national test asset long after the CRANE program has concluded.”

The AFC suite of technologies enables multiple opportunities for aircraft performance improvements, such as elimination of moving control surfaces, drag reduction and high angle of attack flight, thicker wings for structural efficiency and increased fuel capacity, and simplified high-lift systems.

“Thanks to a variety of innovative participants, the CRANE program has significantly advanced the state of the art of multiple active flow control technologies,” said Wlezien. “We are uniquely positioned to build on those achievements by evaluating a wide range of relevant technologies during our planned X-plane flight tests.”

**16 . Date: 03-02-2023ISR / ISTAR - HALE - Contract - GA-ASI Selected to Build OBSS for AFRLURL: https://www.asdnews.com/news/defense/2023/02/03/gaasi-selected-build-obss-afrl**

General Atomics Aeronautical Systems, Inc. (GA-ASI) will manufacture and perform demonstration flights of the Air Force Research Laboratory’s (AFRL) unmanned Off-Board Sensing Station (OBSS) aircraft. Following a 12-month base period that culminated in a critical design review (CDR), AFRL exercised a build and flight test option.

GA-ASI’s innovative Gambit Series aircraft will validate the “genus/species” concept first developed by AFRL as part of the Low-Cost Attritable Aircraft Platform Sharing (LCAAPS) program focused on building several aircraft variants from a common core chassis. LCAAPS is a major air vehicle effort under AFRL’s Autonomous Collaborative Enabling Technologies (ACET) portfolio, which is focused on developing technologies for Autonomous Collaborative Platforms (ACP).

“Throughout our 30-year history, GA-ASI has pioneered the advancement of unmanned aircraft systems that support our warfighters,” said GA-ASI President David R. Alexander. “AFRL is moving forward with GA-ASI because we have the right background and experience to develop the OBSS aircraft at scale and on time, and we look forward to working with them to deliver another game-changing UAS.”

**17 . Date: 15-02-2023Partnership - HAL Will Provide MRO Support for GA-ASI MQ-9B Turbo-Prop EnginesURL: https://www.asdnews.com/news/defense/2023/02/15/hal-will-provide-mro-support-gaasi-mq9b-turboprop-engines**

General Atomics Aeronautical Systems, Inc. (GA-ASI) and Hindustan Aeronautics Limited (HAL) have jointly announced that turbo-propeller engines, which power GA-ASI’s state-of-art MQ-9B Remotely Piloted Aircraft System (RPAS), will be supported by the HAL Engine Division at Bengaluru for the Indian market.

“GA-ASI is proud to collaborate with HAL on this prestigious project,” said Dr. Vivek Lall, Chief Executive, General Atomics Global Corporation. “HAL is the foremost Indian public sector Aerospace and Defence agency, and its vast experience in the domain of aero-engine technology makes it our natural partner in India.”

Though the turboprop engine fitted onboard the MQ-9B RPAS looks similar to other commercial engines in its category, it is unique in its configuration and operation, requiring special training and equipment to maintain, repair and overhaul.

The Expression of Interest was exchanged in presence of Mr. C B Ananthakrishnan, Chairman and Managing Director, HAL and Mr. Mihir Kanti Mishra, CEO (Bangalore Complex), between Dr. Vivek Lall, Chief Executive, General Atomics Global Corporation and Mr. B. Krishna Kumar, Executive Director (Engines & IMGT).

“HAL has been manufacturing and providing MRO support for TPE 331-5 engines for the last 40 years. We are also establishing facilities for manufacturing TPE 331-12B engines for HTT-40 project. The engine used on the MQ-9B RPAS belongs to the same family of engines with upgraded configuration to adapt to the RPAS technology. I am glad that HAL Engine Division, Bangalore would be providing MRO support to the engine for MQ-9B RPAS, one of the most sophisticated equipment in the world,” said Mr. C B Ananthakrishnan, Chairman and Managing Director, HAL.

GA-ASI and HAL eagerly look forward to formulating a comprehensive engine MRO program for upcoming RPAS projects. This joint collaboration echoes India’s clarion call for ‘Atmanirbhar’ or ‘Self-Reliance’, while underscoring the deep industrial connection between U.S. and Indian Aerospace Companies.

**18 . Date: 16-02-2023Partnership - GA-ASI Partners with Divergent Technologies, Inc.URL: https://www.asdnews.com/news/defense/2023/02/16/gaasi-partners-with-divergent-technologies-inc**

UAS Leader Integrates DAPS Digital Manufacturing Process

General Atomics Aeronautical Systems, Inc. (GA-ASI), the world’s leading manufacturer of Unmanned Aircraft Systems (UAS), radars, electro-optic and related mission systems, is partnering with Divergent Technologies, Inc. (Divergent) to support its Additive Manufacturing applications development efforts and implement a full digital manufacturing process for GA-ASI’s products. Divergent has developed a data-driven approach to design, fabricate and assemble vehicle structures called the Divergent Adaptive Production System (DAPS). GA-ASI is working with Divergent to apply this capability to manufacturing its line of UAS.

“Throughout our 30 years of designing and developing advanced UAS, GA-ASI has been focused on implementing new capabilities into our manufacturing process,” said GA-ASI President David R. Alexander. “We’re working with Divergent to integrate their technology as part of our Additive Design and Manufacturing Center of Excellence strategy, with the goal of optimizing our design and manufacturing processes and providing next generation UAS at the lowest cost.”

In 2022, GA-ASI began a joint development program with Divergent, which led to a stronger strategic partnership on multiple platforms. GA-ASI’s Additive Manufacturing (AM), aircraft integrity, material and design engineering teams are working with Divergent to adapt, apply and qualify its automobile industry-qualified technology to GA-ASI’s aircraft production. Divergent has grown within the automobile sector as a Digital Manufacturing process innovator, producing some of the fastest cars on the market with several recent car OEM adoption announcements.

“Divergent has invented the first industrial digital manufacturing system. Leveraging innovations in artificial intelligence, 3D printing, and automation, DAPS can be used to build the underlying structure for virtually any vehicle – whether land, sea, air, or space – better, faster and more cost efficiently than traditional manufacturing,” said Kevin Czinger, Founder, Lead Inventor & CEO of Divergent.

GA-ASI and Divergent have already completed two projects leading to a fully integrated small (< 500 lbs.) UAS aerostructure, leveraging model-based, Artificial Intelligence (AI)-driven, and topology optimized designs. The integrated metal structure was 3D printed, which led to the reduction of the part count integration by over 95% while meeting weight targets.

The DAPS process inspected each printed components by creating a full digital twin of the small UAS (SUAS) that was then applied to a fully automated, tool-less robotic assembly process that took less than 20 minutes to complete. This process enabled the team to go from a print-ready SUAS design to a fully assembled deliverable airframe in less than two days. GA-ASI anticipates this capability will enable near-theater ramp capacity in the future to support the warfighter.

This innovative approach to design and manufacturing leads to highly integrated weight and performance-optimized designs that are naturally, but not exclusively, leveraging AM technologies at a substantially lower airframe recurring cost, while providing a rapid tool-less iterative design approach for multiple platform variants.

**19 . Date: 22-02-2023Partnership - Collins Aerospace Signs MoU With Saudi Arabia to Support Development of UASs and RoboticsURL: https://www.asdnews.com/news/defense/2023/02/22/collins-aerospace-signs-mou-with-saudi-arabia-support-development-uass-robotics**

Collins Aerospace has signed a memorandum of understanding with SRB Aerial Systems L.L.C to support research, development and execution of unmanned aerial systems and robotics for use by the Kingdom of Saudi Arabia.

Collins will provide its extensive Unmanned Aerial Systems or UAS integration experience to SRB Aerial Systems. The company’s mission systems hardware and software combined with its radio communication, imaging and sensor development expertise will be key assets to develop UAS sovereign capabilities in the country.

“This partnership is a key step in supporting the Kingdom of Saudi Arabia’s Vision 2030 to bring locally owned and manufactured products to KSA,” said Colin Mahoney, President Customer & Account Management, Collins Aerospace. “Collins’ products will be included on locally produced UAS, expanding our shared market and supporting the missions of today and the future.”

SRB Aerial Systems is a leader in design, development and production of UAS products and solutions. As one of the only UAS manufacturers in the Kingdom of Saudi Arabia, SRB Company has a goal of providing 100% locally owned and manufactured UAS to the country.

“Together, SRB Aerial Systems and Collins Aerospace will develop the framework to support research and development of strategic UAS and robotic technologies for the Saudi forces as we ambition to grow our offering with UAS weapons and Urban Air Mobility solutions” said Major General (ret.) Ahmed Al-Jehani, Chief Executive Officer of SRB Aerial Systems.

Collins will be working with SRB to ensure a successful flight trial in the second quarter of 2023, including engineering and product integration.

**20 . Date: 27-02-2023Armed ISR / ISTAR - HALE - General - PlatformKratos XQ-58A Valkyrie Continues Successful Flights and Capability EvolutionURL: https://www.asdnews.com/news/defense/2023/02/27/kratos-xq58a-valkyrie-continues-successful-flights-capability-evolution**

Kratos Defense & Security Solutions, Inc. (NASDAQ: KTOS), a leading National Security Solutions provider and industry-leading provider of high-performance, jet-powered unmanned aerial systems, announced today that through multiple contracts, Kratos has and is continuing to evolve and apply its XQ-58A Tactical UAS with a focus on experimentation to support operational missions and employment to satisfy multiple existing and forming application sets for the DoD. The photographs illustrate some of the unique capabilities and performance the system enables.

Steve Fendley, President of Kratos Unmanned Systems Division, said, “Late 2022 and early 2023 were and are expected to continue to be exciting times for high performance jet drone systems. World events, budget realities, and technology are intersecting to illustrate the incredible capability that these systems enable through unique and, in some cases, unconventional approaches that result in low-risk, budget-achievable solutions for the 21st century defense needs. Kratos is incredibly excited to be a major part of this ground-breaking evolution.”

**21 . Date: 02-03-2023Partnership - GA-ASI Establishes New Collaboration Agreement with Leidos in AustraliaURL: https://www.asdnews.com/news/defense/2023/03/02/gaasi-establishes-new-collaboration-agreement-with-leidos-australia**

Represents a Continuation of Business Relationship With Cobham Australia

General Atomics Aeronautical Systems, Inc. (GA-ASI) and Leidos have agreed to continue the successful business relationship previously held between GA-ASI and Cobham Australia. With Leidos’ acquisition of the Cobham Special Mission business in October 2022, Leidos has now assumed the role of GA-ASI’s primary Australian industry collaborator for defence and security business.

The arrangement will support discussions relating to a Defence Armed Remotely Piloted Aircraft System, and the Australian Border Force future crewed/uncrewed aircraft system under the Civil Maritime Capability Program.

Discussions are also underway between Leidos and GA-ASI for cooperation on further defence projects in Australia and opportunities in the U.S.

“GA-ASI is delighted to establish a collaboration agreement with Leidos that continues the successful business relationship previously held with Cobham since 2006,” said Ken Loving, GA-ASI regional vice president for Indo-Pacific. “The broader and deeper capabilities that Leidos brings to the relationship, including its impressive capability within Australia, combined with GA-ASI’s substantial global experience in remotely piloted and autonomous aircraft systems, will provide an impressive capability for Australia’s future defence and security needs.”

Leidos Australia Chief Executive Paul Chase said, “We are delighted to continue and build upon the terrific partnership that Cobham Special Mission has developed with GA-ASI over the past 17 years. When we acquired Special Mission last year, we recognised the huge potential for both advancing current capabilities and services and pursuing new opportunities in Australia and globally. General Atomics has excellent technology and by collaborating with them, our complementary capabilities and experience will combine to provide world-class solutions for current and future customers.”

**22 . Date: 07-03-2023Armed ISR / ISTAR - HALE - Contract - PlatformGA-ASI Continues LongShot SupportURL: https://www.asdnews.com/news/defense/2023/03/07/gaasi-continues-longshot-support**

Selected by DARPA to Continue With Phase 2 of Program Development

General Atomics Aeronautical Systems, Inc. (GA-ASI) is pleased to continue supporting the Defense Advanced Research Projects Agency (DARPA) LongShot program. LongShot changes the paradigm of air combat operations by demonstrating an unmanned air-launched vehicle capable of employing air-to-air weapons.

Current air superiority concepts rely on advanced manned fighter aircraft to provide a penetrating counter air capability to effectively deliver weapons. It is envisioned that LongShot will increase the survivability of manned platforms by allowing them to be at standoff ranges far away from enemy threats, while an air-launched LongShot unmanned aerial vehicle (UAV) efficiently “closes the gap” to take more effective missile shots.

After a successful Preliminary Design Review (PDR) in February 2022 at the end of Phase 1, GA-ASI was selected by DARPA to continue into Phase 2 in March 2022. During Phase 2, detailed designs are being completed and ground tests conducted to decrease program risk.

A key test event completed early in Phase 2 was multi-body wind tunnel test, characterizing the LongShot air vehicle and air-to-air weapon separation. Critical Design Review (CDR) for the program is planned for early 2023, which will complete the Phase 2 portion of the program. GA-ASI is currently generating a proposal response for the third phase of the program.

“GA-ASI is committed to the successful flight demonstration of the LongShot air vehicle,” said GA-ASI Senior Director of Advanced Programs Michael Atwood. Upcoming Phase 2 ground tests will demonstrate the viability of key subsystems. Phase 3 would initiate the prototype manufacturing and flight testing phase of the program. Flight testing would begin in 2024.

**23 . Date: 08-03-2023Target Drone - Tactical - Contract - AF Awards Kratos Sole Source $21.7M Contract for FRP (Lot 19) of the BQM-167A TargetURL: https://www.asdnews.com/news/defense/2023/03/08/af-awards-kratos-sole-source-217m-contract-frp-lot-19-bqm167a-target**

Kratos Defense & Security Solutions, Inc. (NASDAQ: KTOS), a Technology Company in the Defense, National Security and Global Markets and industry-leading provider of high-performance, jet-powered unmanned aerial systems, announced today that Kratos has received a $21,738,865.71 Firm Fixed Price delivery order for Lot 19 procurement of 17 aircraft, mission kits, certain flight consumables, and technical data for the BQM-167A Air Force Subscale Aerial Targets (AFSATs) under the five-year base contract. Air Force Life Cycle Management Center, Eglin AFB, Florida, is the contracting activity.

Steve Fendley, President of Kratos Unmanned Systems Division, said, “Kratos’ affordable target systems provide an incredibly high-performance-to-cost ratio and key, high-performance and threat-representative capabilities to support USAF training and test needs. We have shared a great partnership and team approach with the USAF throughout our nearly 20 years of working together on target systems. Kratos is excited that our system maturity warrants and enables the long-term contract and proud that the Air Force has this confidence in our target systems and personnel.”

Work will be performed at a Kratos manufacturing facility. Total contract value if the options for Lots 17-21 and spares are all exercised at the maximum production quantities is $374,043,801.76.

**24 . Date: 31-03-2023ISR / ISTAR - Small - General - PlatformInsitu Sets Company Record for Longest Flight at 25.5 hours with its Integrator UASURL: https://www.asdnews.com/news/defense/2023/03/31/insitu-sets-company-record-longest-flight-at-255-hours-with-its-integrator-uas**

Insitu, A Boeing Company, recently set a company record for the longest duration flight with a 25.5-hour sortie with its Integrator Unmanned Aircraft System (UAS) on an operational mission.

The record flight was achieved with a 150-pound Integrator equipped for a multi-payload mission. It surpassed the previous record of 24.2 hours performed in 2014, also with an Integrator.

The customer requested persistent eyes on target for an extended period. The Integrator’s configuration, with its long endurance capability, allowed the customer to use one aircraft instead of two or more lower endurance aircraft.  
  
UAS with lower endurance require transitioning among multiple aircraft to maintain persistent eyes on a target.  The Integrator allows customers to assure sustained eyes on target with less risk to the mission.

Long endurance aircraft reduce risk with fewer launch and recovery sequences, where UAS are most vulnerable to damage. They also provide better coverage in areas with sparse basing and allow customers to operate with less equipment and manpower than aircraft with lower endurance.

“Our Integrator provides customers benefits they can’t get with other unmanned aircraft,” said Diane Rose, Insitu president and CEO. “Customers can focus on the mission and have confidence to achieve their critical goals more affordably and reliably with our field-proven unmanned aircraft.”

Insitu’s long endurance Integrator provides benefits to customers in many ways, such as an unbroken chain of imagery intelligence, surveillance and reconnaissance (ISR), to ensure customers continually track a target of interest. It also provides pattern of life, allowing customers to review video footage to identify valued targets.

Insitu’s full suite of modular payloads provides persistent ISR in the world’s most extreme environments. Our payloads, ranging from day and night full motion video (FMV) and signals intelligence (SIGINT) to electronic warfare (EW), extend the capabilities of UAS to meet the specific and evolving needs of our customers through flexibility and easy integration.

**25 . Date: 24-04-2023ISR / ISTAR - Small - General - PlatformField Testing the Newest SKIRON-X sUASURL: https://www.asdnews.com/news/defense/2023/04/24/field-testing-newest-skironx-suas**

Aurora Flight Sciences, a Boeing Company, recently released the second iteration of its SKIRON Expeditionary small UAS (SKIRON-X). The Group 2 unmanned aircraft system combines the convenience of an electric vertical take-off and landing (eVTOL) configuration with the longer endurance of a fixed-wing design. Over the winter, Aurora teams took SKIRON-X into the field to prove-out the results of product upgrades and to test vehicles newly produced in Aurora’s Virginia facility.

The most recent round of product upgrades focused on optimizing battery usage through improvements in the propulsion system, software, and flight standards. While maintaining the same 49 lb. takeoff weight, the max flight endurance was extended to three hours.

“In addition to longer endurance, it handles better in gusty winds and the transitions from vertical to forward flight are smooth and fast. Also, the automatic low speed stall recovery behavior is more benign than any other aircraft I have seen,” said Andrew Heafitz, chief engineer for the sUAS program. “SKIRON-X has a very good airframe architecture and seeing the tuning improvements we made in action this winter was really gratifying.”

Flight endurance and other specifications are based on the vehicle equipped with Trillium’s HD55 EO/IR camera system. However, SKIRON-X offers a highly flexible payload system, which can accept a variety of Trillium cameras or custom payloads. For example, Aurora often uses the Trillium HD25 with a 3D-printed nose cone ballasted to match the weight of the HD55. With SKIRON-X, payload swaps can be completed in the field in less than a minute.

The other features that make SKIRON-X field-friendly are its ability to take-off and land anywhere, its quick-and-easy assembly, and its innovative carrying case.

The SKIRON-X case converts into a convenient assembly stand, which keeps the vehicle secured while the wings and v-tail are easily snapped in place. A single tool attaches the wing assembly to the fuselage and securely closes compartments such as for the battery.

This winter, Aurora conducted flight testing in both Massachusetts and Virginia, testing through cold and even snow.

“Our Massachusetts-based engineering teams love getting out in the field, even when it’s cold. It gives us the opportunity to test our updates quickly and gain additional insight through hands-on experience,” said Heafitz. “We were also able to partner directly with our manufacturing, flight operations, and field service teams based in Virginia.”

SKIRON-X is in production at Aurora’s headquarters in Manassas, Virginia. For more information, visit aurora.aero/skiron-x or stop by booth #2816 at AUVSI Xponential, May 9-11, 2023, in Denver, Colorado.

**26 . Date: 26-04-2023Component - General - DatalinkInmarsat Government Unveils New LAISR Ultra-Lightweight User Terminal for Government Airborne, ISR MissionsURL: https://www.asdnews.com/news/defense/2023/04/26/inmarsat-government-unveils-new-laisr-ultralightweight-user-terminal-government-airborne-isr-missions**

LAISR ULW supports latest U.S. Government beyond line-of-sight communications requirements for uncrewed and crewed aeronautical platforms

Inmarsat Government, the leading provider of secure, global, mission-critical telecommunications to the U.S. Government, today announced the availability of its next-generation L-band Airborne Intelligence, Surveillance and Reconnaissance Ultra-Lightweight (LAISR ULW) user terminal.

The terminal, which consists of a core module and antenna, is the latest addition to the company’s award-winning LAISR family of L-band terminals. ULW delivers access to high availability, high performance, full duplex, secure beyond line-of-sight (BLOS) communications via the Inmarsat global ELERA L-band network.

LAISR ULW provides customers with high data rate throughput to support BLOS communications, while further reducing the total terminal SWaP. Featuring an integrated antenna self-steering capability, ULW does not require external navigation data from the host platform and can operate in GPS denied environments.

LAISR ULW is enabled by Inmarsat Government’s Black ICE Medium Software Defined Radio (SDR), which implements the powerful and highly efficient Digital Video Broadcasting Satellite Second Generation (DVB-S2X) waveform in a low-SWaP form factor. It also includes an advanced Radio Frequency Front End (RFFE), which provides robust filtering capabilities including automatic terrestrial interference protection. LAISR ULW also leverages Inmarsat Government’s multiprotocol label switching (MPLS) terrestrial backbone to securely transport customer traffic from the platform to its destination.

Customers can select from multiple antenna options, enabling them to tailor the terminal to meet their unique requirements. Antenna options range from compact omni-directional patch antennas to fuselage mounted, high-gain, steered variants. The terminal can be implemented in a stand-alone configuration or retrofitted into an existing Inmarsat enabled aircraft.

Matt Wissler, Chief Technology Officer, Inmarsat Government, said “Beyond line-of-sight communications are a critical component of U.S. Government’s AISR operations, and our customers need a secure, reliable and flexible solution to transmit information. With LAISR ULW, we provide our users with another compact and customer-focused innovation that supports their aero communications requirements for a globally portable, low-SWAP, flexible high-speed solution.

“We built these solutions tailored specifically to meet our government customers’ mission-critical needs. The ULW terminal reflects upon their critical requirements for SATCOM-enabled BLOS connectivity and provides small UAS platforms (Group 2+) with a globally portable communications solution that provides high-rate return and maintains platform range to support ISR missions worldwide.”.

**27 . Date: 10-05-2023ISR / ISTAR - Mini - General - PlatformAeroVironment Introduces VTOL Kit for Puma AE UASURL: https://www.asdnews.com/news/defense/2023/05/10/aerovironment-introduces-vtol-kit-puma-ae-uas**

* **New vertical take-off and landing kit expands operational capabilities and streamlines constrained area operations**

AeroVironment, Inc. today introduced the Puma™ VTOL (vertical take-off and landing) kit, designed for plug-and-play integration into Puma 2 AE and Puma 3 AE small unmanned aircraft systems (SUAS). The optional Puma VTOL kit expands the operational capabilities of the combat-proven Puma system in complex terrain, as neither runway nor large open space are required for launch and recovery of the VTOL-equipped Puma, allowing operators to launch anywhere, anytime.

Leveraging AeroVironment’s Crysalis™ ground control solution, the added VTOL capability now allows a single Puma operator to execute missions and streamline operations through features like one-button launch and recovery.

“The modern battlefield offers varying types of complex terrain features, both natural and manmade, that can pose challenges to small unit operations and their use of unmanned aircraft. Our new Puma VTOL kit provides the operator with a wider range of launch and land capabilities, enhancing the unit’s mission while further safeguarding its personnel during these periods of transitional flight,” said Shane Hastings, AeroVironment’s vice president and product line general manager for small UAS. “The VTOL kit converts the Puma AE into a highly precise and agile ISR asset where a single operator can effortlessly launch the aircraft from a small space and attain mission-critical information of enemy forces in a timely manner and land on a desired rooftop or other small, targeted areas.”

Integration of the Puma VTOL kit requires minimal one-time modifications to the aircraft’s airframe by qualified personnel. Once modified, the plug-and-play Puma VTOL kit can be easily added or removed in the field within a couple of minutes, allowing operators to quickly transition between a fixed-wing and VTOL platform to suit varying mission needs with a single aircraft.

**28 . Date: 19-05-2023Target Drone - Tactical - Contract - QinetiQ to Deliver Unique Banshee Jet 80+ Target System to US ArmyURL: https://www.asdnews.com/news/defense/2023/05/19/qinetiq-deliver-unique-banshee-jet-80-target-system-us-army**

* **QinetiQ Target Systems provides new low-cost aerial target to US Army Threat Systems Management Office**

QinetiQ is to provide the US Army’s Threat Systems Management Office (TSMO) with a uniquely developed version of its Banshee Jet 80+. Known as the MQM-185B, the target will help the US Army train for real-world scenarios by flying the hyper realistic threat targets.

The MQM-185B aerial target combines QinetiQ’s innovative technology with the advanced options required by the TSMO to deliver a capability uniquely optimised for the US Army. As a result, the Banshee will be compatible with the TSMO’s proprietary Army Ground Aerial Target Control System (AGATCS).

Flown in over 40 countries and used during exercises launched from the HMS Prince of Wales aircraft carrier, the Banshee Jet 80+ provides the opportunity to run accurate drills by emulating cruise missiles and enemy fast jets which may be faced on mission. The MQM-185B has a maximum altitude of 30,000ft and can also perform low level sea skimming and terrain following, delivering a realistic adversary to train against. The use of the drone targets will be key to the US Army and their allies in improving their defence capabilities as the Banshee is able to emulate a wide variety of in-theatre threats.

Ryan Peterson, Customer Account Manager, QinetiQ Target Systems, said: “Using highly accurate targets such as the Banshee is becoming a necessity for our defence customers. As the threat environment increases in complexity, organisations such as TSMO are seeking technology capable of delivering complex training and evaluation exercises.”

“The MQM-185B, combined with QinetiQ’s engineering and operational flexibility, enables us to deliver a customised platform that satisfies TSMO requirements and makes its operations more agile and cost effective. We’re delighted to be supporting the US Army as it strengthens its training and Test and Evaluation capabilities.”

**29 . Date: 24-05-2023Research - Small - General - PlatformExosonic's EX-3M "Trident" UAS Enters Testing ProgramURL: https://www.asdnews.com/news/defense/2023/05/24/exosonics-ex3m-trident-uas-enters-testing-program**

Exosonic today announced the successful beginning of a ground and flight test program to validate the capabilities of its EX-3M “Trident” autonomous, open architecture, high-speed, developmental unmanned aerial system (UAS) test aircraft.

Exosonic designed, manufactured, and brought the EX-3M to flight test in only nine months. The team accomplished this by rapidly iterating the aircraft design, diversifying the supply chain, and maintaining the assembly process within Exosonic.

The Trident will serve as a quarter scale testbed to validate the autonomy software that will ultimately be incorporated into Exosonic’s full-scale supersonic UAV, the EX-3 “Revenant”, the supersonic fifth-generation aerial target UAS that Exosonic is designing under a $1.250 million Small Business Innovation Research (SBIR) contract with the USAF. In addition to the aerial target role, Exosonic will investigate a modified EX-3 version to serve in the adversary air role as well.

**30 . Date: 25-05-2023Cargo - Small - Partnership - SoftwareUAVOS And Bayanat Enter Partnership For The Supply of Autonomous HelicoptersURL: https://www.asdnews.com/news/defense/2023/05/25/uavos-bayanat-enter-partnership-supply-autonomous-helicopters**

UAVOS Inc. has been selected by Bayanat, a leading provider of AI-powered geospatial solutions, to deliver its Unmanned Aircraft System (UAS) for a wide variety of applications including aerial photography and perimeter control. The UAS consists of two UVH 25EL unmanned autonomous helicopters powered by electric motors, a ground control station and various sensor payloads including the multispectral camera, LiDAR, as well as digital and thermal cameras. UAVOS also provides full operational support, including training, and a fundamental review of what the UAS is to be used for.

The autonomous helicopter’s advanced capabilities of long endurance of up to 1.5 hours, along with its camera capabilities, enable the UVH 25EL to carry out accurate mapping within a radius of 67 km. The accurate mapping can successfully take place even in harsh environmental conditions, with winds of 14 m/s during take-off and landing, be it day or night. The UVH 25EL electric helicopter has a practical load weight of 5 kg. These capabilities ensure high performance as well as maximum operational flexibility for applications such as coastal security, search & rescue, and advanced aerial photography missions.

The electric propulsion helicopter is economical, simple to operate, easy to maintain, and needs no fuel storage, making it environmentally friendly and safe. In addition, like other UAVOS platforms, it is adapted to high-altitude flights. The UAS’ autorotation ability is an important safety feature of the UVH 25EL; it provides a type of flight that can be used to descend from heights after an engine failure, while the UAV remains controllable. The helicopter also features a parachute recovery system for maximum aviation safety.

“We are grateful to Bayanat for their confidence in proven systems developed by UAVOS,’ said Co-Founder and CEO of UAVOS Aliaksei Stratsilatau. “We are confident that UVH 25EL UAS will meet their requirements offering easy and safe aerial access to challenging areas, a larger surface coverage in a single flight, higher resolution images, efficient, and cost-effective aerial data acquisition”.

**31 . Date: 01-06-2023ISR / ISTAR - Small - Partnership - SoftwareTextron Systems and Anduril Industries Complete Successful Uncrewed-Uncrewed Teaming DemoURL: https://www.asdnews.com/news/defense/2023/06/01/textron-systems-anduril-industries-complete-successful-uncreweduncrewed-teaming-demo**

**Textron Systems and Anduril Industries Demonstrate Interoperability of Aerosonde UAS and Lattice for Mission Autonomy Software**

Textron Systems Corporation, a Textron Inc. (NYSE:TXT) company, and Anduril Industries, a defense technology company, completed a successful demonstration of a Textron Systems Aerosonde® Hybrid Quad (HQ) UAS operated with multiple payloads onboard to simulate and geolocate threat emitters.

During the demonstration, an operator conducted missions using Anduril’s Lattice for Mission Autonomy to command and control multiple first and third-party UAS with mixed sensor payloads and capabilities including one Textron Systems’ Aerosonde HQ UAS and three variants of from Anduril’s ALTIUS-600 Launched Effects family loitering munitions to demonstrate an autonomous Suppression/Destruction of Enemy Air Defenses (SEAD/DEAD) mission in support of an Army Aviation Air Assault mission. Textron Systems and Anduril integrated multiple sensors, platforms and networks across teams of manned and unmanned systems, molding together hardware and software across domains.

The Aerosonde HQ has vertical takeoff and landing (VTOL) capability and performs as a modular workhorse for land and sea-based intelligence, surveillance and reconnaissance (ISR) missions. The aircraft has mission-tailorable agility that addresses the need for increased capability, lethality and survivability. Aerosonde has been expanding into the maritime domain, providing real-time situational awareness for surface combatants internationally.

“Building off the technology that we demonstrated last year at the U.S. Army’s Cyber Quest and Project Convergence exercises, this is the latest exercise to show our cross-domain interoperability and how easily our systems can integrate with others to meet our user’s requirements,” said Wayne Prender, Senior Vice President of Air Systems. “This exercise with Anduril allowed us to showcase how our capabilities are directly applicable to next-generation Army programs like FTUAS, SCI and Launched Effects.”

Anduril’s Lattice for Mission Autonomy is a hardware-agnostic end-to-end software platform that enables teams of robotic assets to work together under human supervision to dynamically perform complex missions in any domain. Lattice for Mission Autonomy performs the core functions that are essential for mission planning and execution—including autonomous piloting, the ability to sense and make sense of the battlespace, identification of threats and objects of interest, managing signature and communications to enhance survivability, orchestrating multi-asset maneuvers, and synchronizing the delivery of effects. The software platform is built with an open and extensible architecture enabling the integration and interoperability of third-party hardware and software, like the Aerosonde HQ UAS.

“When you view the pace of technology development through a software lens, you approach the problem differently,” said Andrew Carter of Anduril. “Modern software platforms can allow you to iterate much faster and focus on bringing an ecosystem of technologies, behaviors, and networks together to accomplish a mission outcome. Anduril and Textron Systems were able to integrate, test, and execute in 15 weeks, highlighting the modular open systems architecture of Lattice for Mission Autonomy and the Textron Systems Aerosonde HQ platform.”

**32 . Date: 05-06-2023ISR / ISTAR - Tactical - General - PlatformLeonardo Unveils AWHero RUAS' New Developments Showing Unique Technologies and Capabilities for Multi-purpose Maritime OperationsURL: https://www.asdnews.com/news/defense/2023/06/05/leonardo-unveils-awhero-ruas-new-developments-showing-unique-technologies-capabilities-multipurpose-maritime-operations**

The system enhancements unveiled at SEAFUTURE 2023 today reflect the move from basic design to CONOPS (Concept of Operations) focused configuration, particularly for operations in the naval domain.

New developments include heavy fuel powerplant, airframe modification, advanced sensor modularity among others; AWHero also builds upon proven basic configuration including rotor system and transmissions, core avionic system, data-link architecture, and control station.

AWHero is part of a forward-looking roadmap that Leonardo is implementing to maintain its leadership in vertical flight and UAS applications in the frame of current and future technological evolutions.

Leonardo unveiled today the latest developments for its 200 kg class AWHero RUAS (Rotary Uncrewed Aerial System) during an official ceremony held at SEAFUTURE 2023 (La Spezia – Italy) on board Italian Navy’s Paolo Thaon di Revel PPA (Pattugliatore Polivalente d'Altura - Multipurpose Offshore Patrol Vessel). The unveiling was carried out in the presence of representatives from institutions and across industry.

AWHero leverages on Leonardo’s unique combination of longstanding and extensive capabilities in rotorcraft system development and within integration in support of the uncrewed aerial system and naval application sectors. The first and only RUAS in its class with a military certification, obtained in Italy in late 2021, and based on worldwide recognised standards, which already demonstrate the robustness of the system, AWHero now features new developments stemming from previously planned and anticipated activities based on a range of enhancements.

The new developments include in particular: a heavy fuel powerplant based on a unique twin-engine solution increasing efficiency safety and Time Between Overhauls; airframe modifications delivering significant operational and support advantages (powerplant integration, payload bay capacity, system/sensor integration and field of view, maintainability, on-deck stability); advanced sensor modularity; - the Leonardo Gabbiano TS Ultralight maritime radar for unmatched all-weather wide area coverage -; enhanced survivability, and cyber resilience. However, the system builds upon the certified and proven basic configuration with which it shares the rotor system, transmissions, a core avionic system, data-link architecture, and a control station.

Gian Piero Cutillo, MD of Leonardo Helicopters, said “AWHero is part of a forward-looking roadmap that Leonardo is implementing to maintain its leadership in vertical flight applications in the frame of current and future technological evolutions, which will extensively re-shape this industry. Within this roadmap, uncrewed systems and relevant enabling technologies (i.e. automation/autonomy, communications, sensors integration and fusion) are key elements in which the company has been significantly investing, while  leveraging a fruitful collaboration with the Italian Military Authorities. The system enhancements unveiled today reflect the incremental yet firm move from basic design to CONOPS (Concept of Operations) focused configuration. This is particularly true for the relevant naval applications, which remain a priority market for these kind of systems, which are able to meet intelligence and situational awareness extension capabilities with an optimized use of resources.”

AWHero is optimized to support a range of assets involved in a range of naval and multi-domain operations such as ISTAR (Intelligence Surveillance Target Acquisition and Reconnaissance), ASW (Anti-Submarine Warfare), Electronic Warfare, Communication Relay, Border Protection, Combat support, and Force Protection, and can be integrated with the naval combat management system.  
Leonardo’s integrated capabilities in rotary-wing platforms, system integration, UAS systems and support/training services as well as proprietary technology delivers AWHero’s operators with unmatched system growth and customisation potential and through-life cycle support benefits.

Since 2019, AWHero has been conducting maritime surveillance capability demonstrations on ships within the framework of the OCEAN2020 initiative, the European Defence Fund strategic research programme for naval surveillance technology and maritime safety, including 43 organisations across Europe and led by Leonardo. It has benefitted from a range of capability demonstration initiatives in the RUAS domain in Italy, UK and Europe.

Leonardo is the only company in Europe, which is able to provide complete solutions by designing and developing all the elements of uncrewed systems: platforms, sensors, mission systems, control stations and offer customers a certified low risk, highly effective, fully integrated capability. Leonardo is a key partner and contributor to significant European uncrewed system programmes and Leonardo’s expertise and capabilities in the sector have been extensively demonstrated during international exercises. Leonardo has developed proprietary uncrewed systems and technologies, including anti-drone capabilities and uncrewed traffic management (UTM) systems. The continuous development and integration of cutting-edge solutions across all domains of remotely-piloted and autonomous/semi-autonomous systems and technologies is a key element of Leonardo’s ‘Be Tomorrow 2030’ Strategic Plan.

**33 . Date: 19-06-2023Armed ISR / ISTAR - HALE - Partnership - Leonardo's Growing Role in the Multinational Eurodrone ProgrammeURL: https://www.asdnews.com/news/defense/2023/06/19/leonardos-growing-role-multinational-eurodrone-programme**

* **The multinational project managed by OCCAR today involves the participation of four countries and is of key strategic importance for Europe**
* **To date 20 systems has been already ordered, for a total of 60 aircraft. Each system will comprise three aircraft and two ground stations for the remote handling of the drone**

Leonardo will be developing the mission system for Eurodrone, the MALE-class (Medium Altitude Long Endurance) remotely piloted aircraft set to strengthen Europe's strategic defence autonomy with high-performance independent operational systems. The aircraft's Airborne Mission System (AMS) incorporates a suite of advanced sensors, including radar and the Multi Purpose Mission Computer (MPMC). Within the programme, worth a total of 7 billion euro, Leonardo is playing a key role through an industrial workshare regarding the on-board electronics and aerostructures component, which in addition to the AMS also includes the Airborne Electrical & Environmental Control System, the Airborne Armament System and the design and production of the aircraft's entire wing structure.

Thanks to the Airborne Mission System’s advanced suite of sensors, the Eurodrone will be able to perform Intelligence, Surveillance, and Reconnaissance (ISR) missions at sea and on land, collecting and integrating data from the various on-board sensors - even in critical operational conditions - while also recording and sending it to the ground station and cooperating units to provide a complete tactical picture. The fusion of data in real time has the advantage of minimising the time and effort needed by operators to analyse and understand events that are happening in the area of interest, thus accelerating response times throughout the entire chain of command.

The design, development, integration and production phases for the AMS system will all take place at Leonardo’s Caselle Torinese location. The company will also be engaged in supporting the integration of prototypes at the Manching base and of flight testing activities in the relevant polygons. Through its joint venture MBDA, Leonardo will integrate the air to surface Brimstone missile. The weapon system will allow the platform to engage and neutralise a wide range of static and moving threats day or night in all-weather conditions. The multinational programme, managed by OCCAR (Organisation Conjointe de Coopération en Matière d'Armement), at present sees the participation of Germany, Spain, France and Italy and has orders for 20 systems, each made up of two ground stations and three aircraft plus Ground Support Equipment, spare parts, training and five years’ support in the initial phases of the service.

The innovative technologies that the platform will have available, designed for dual-use purposes, will enable it to become one of the pillars of all next-generation aircraft systems for the benefit of national governments and armed forces. The twin-engine drone is the first unmanned aircraft system conceived for flying in non-segregated airspace. Its modular design will provide advanced operational capabilities for ISTAR (Intelligence, Surveillance, Target Acquisition, and Reconnaissance) missions, helping to expand the independent technology base in the uncrewed sector. Finally, taking the digital approach in drone design, production and services will make possible significant improvements in development times, quality and cost reduction, generating 7,000 highly qualified jobs in Europe.

**34 . Date: 20-06-2023Armed ISR / ISTAR - MALE - Partnership - Detect & AvoidGA-ASI Selects ScioTeq to Support Detect and Avoid ProgramURL: https://www.asdnews.com/news/defense/2023/06/20/gaasi-selects-scioteq-support-detect-avoid-program**

As General Atomics Aeronautical Systems, Inc. (GA-ASI) continues towards its development goal of earning Technical Standard Order (TSO) authorization from the FAA for its internally developed Detect and Avoid (DAA) system, the company has selected Belgium-based ScioTeq to supply a certified processor and display for its DAA solution. ScioTeq is a proven avionics supplier that was identified as a possible strategic partner at GA-ASI’s Blue Magic Belgium event in 2020.

Earning FAA certification for its DAA system will help GA-ASI’s unmanned aircraft systems (UAS) achieve authorization to operate in non-segregated airspace, which will provide greater access for GA-ASI customers to conduct both military and civil missions. Certification of GA-ASI’s DAA capability is an important milestone for its new MQ-9B certifiable UAS. MQ-9B is designed to integrate safely and operate seamlessly in civil airspace, and the aircraft is fitted for the DAA system.

“GA-ASI’s DAA system is a key capability for our latest MQ-9B SkyGuardian® and SeaGuardian® platforms,” said GA-ASI President David R. Alexander. “We have made a significant investment in developing a core DAA capability, which distinguishes us from our competitors. This includes an air-to-air radar that enables flexible operations in all classes of airspace for our MQ-9B customers. We are pleased to work with ScioTeq and continue our close relationship.”

The partnership will introduce a new generation of visualization computing by incorporating ScioTeq’s certified Next-Gen PU-5200 Avionics Display Computer platform and Projected CAPacitive (PCAP) touch-based Rugged Display Unit RDU-4047 into GA-ASI’s Ground Control Station. ScioTeq’s unique MOSArt® software platform facilitates the integration of GA-ASI’s DAA application on the ScioTeq hardware.

“ScioTeq has long been delivering 24-inch mission displays for the MQ-9B Certifiable Ground Control Systems, and we are now excited to expand our long-term partnership with General Atomics Aeronautical through this latest collaboration,” said Robb Gibbs, CEO of ScioTeq.

MQ-9B SkyGuardian is revolutionizing the long-endurance RPAS market by providing all-weather capability and certification with full compliance to STANAG 4671, the NATO UAS airworthiness standard. SeaGuardian is the maritime derivative of the MQ-9B and remains the first UAS that offers multi-domain Intelligence, Surveillance, Reconnaissance, and Targeting (ISR&T) as an internal payload that can search the ocean’s surface and depths in support of Fleet Operations.

GA-ASI is striving to obtain the first ever TSO-C211/212 authorization by the end of 2025 using the latest guidance published in RTCA/DO-365/366, Minimum Operational Performance Standards for Detect and Avoid Systems.

**35 . Date: 23-06-2023Partnership - DatalinkHensoldt France Appointed As Main Partner for Line of Sight Data Links for the EURODRONEURL: https://www.asdnews.com/news/defense/2023/06/23/hensoldt-france-appointed-as-main-partner-line-sight-data-links-eurodrone**

HENSOLDT and Sener’s Spanish-French team will deliver the Wide Band LOS Ku data link of the Eurodrone program incorporating cybersecurity capabilities.

Following the signing of an industrial collaboration agreement at the end of 2022, Sener Aerospace & Defence and HENSOLDT France have been appointed for the development, certification and future serial production of the Eurodrone’s Line-of-Sight (LoS) Data Links.

While the future Eurodrone will be used for Intelligence, Surveillance, Target acquisition and Reconnaissance (ISTAR) missions, the LoS data links will connect the RPAS (Remotely Piloted Aircraft System) and the different ground stations, enabling real time decision making for military operations.

For the past more than 2 years, Sener Aerospace and Defence and HENSOLDT France have been working together building a successful business relationship based on trust, technical complementarity, continuous joint work and strong leadership. In order to answer Airbus S.A.U’s Eurodrone request for proposal, both companies chose a Prime / Sub contractual scheme with Sener as Prime Contractor and HENSOLDT as main Sub-contractor for Sener. Within the RPAS project, Sener will be particularly in charge of the Narrow Band (NB) data link and will work with HENSOLDT to provide the Lygarion Wide Band (WB) Ku data link.

Sener Aerospace & Defence Data Link system capabilities and HENSOLDT’s Lygarion Line of Sight Wide Band solution will use cutting-edge technologies to facilitate the secure and real-time acquisition and exchange of operational data. The system has been designed to operate in environments requiring a high level of anti-jamming capabilities and secure data transmission such as required for the Eurodrone program.

As the two data links must be compliant with their respective STANAGs (NATO Standardization Agreements) and related security constraints, the X7®, a new state-of-the-art cryptomodule developed by HENSOLDT and offering advanced protection of the transmissions against detection, interception and exploitation will be fitted on both the NB and WB Ku Eurodrone’s LOS data links.

"We are very proud to be working on Eurodrone alongside our technology partner Sener Aerospace & Defence," said Philippe Guibourg, President of HENSOLDT France. "Eurodrone will be a key programme for protecting Europe's sovereignty and HENSOLDT, with its 30 years of experience in on-board data links and cyber security in France, is very honoured to be part of the project.  European RPAS will also be the basis for future Defence programs, such as the FCAS in which the HENSOLDT Group is already involved, so we hope that this successful partnership will lead to further collaborations on European Defence programs".

**36 . Date: 13-07-2023Armed ISR / ISTAR - Tactical - Contract - NGC to Design Autonomous Vertical Takeoff and Landing Aircraft for DARPAURL: https://www.asdnews.com/news/defense/2023/07/13/ngc-design-autonomous-vertical-takeoff-landing-aircraft-darpa**

Northrop Grumman Corporation (NYSE: NOC) has been awarded a contract by the Defense Advanced Research Project Agency’s (DARPA) Tactical Technology Office to design an autonomous vertical takeoff and landing (VTOL) uncrewed aircraft system capable of operating from a moving Navy ship at sea.

* The AdvaNced airCraft Infrastructure-Less Launch And RecoverY (ANCILLARY) demonstrator will be designed as a cost-efficient, multiple-mission capable vehicle built on an agile platform that is runway independent.
* Northrop Grumman's ANCILLARY demonstrator will be capable of carrying a large 60-pound sensor payload with greater endurance of 20 hours’ time on station and mission radius range of 100 nautical miles, which is more than current systems, without using significant additional infrastructure aside from what is on board the air vehicle. The system will also have capability to land on a ship in adverse weather conditions.
* The aircraft will be capable of performing intelligence, surveillance, reconnaissance and targeting missions, and supporting expeditionary missions for special operations forces and logistical missions with significant affordability impacts for ship-to-shore transition of parts and supplies.

**Expert**:  
Tim Frei, vice president, research and advanced design, Northrop Grumman: “In collaboration with DARPA, Northrop Grumman will work to significantly enhance how future autonomous vertical lift aircraft will operate at sea and ashore. The ANCILLARY program enables us to combine our digital engineering expertise with extensive knowledge and insights from past successes in developing and operating uncrewed vertical lift aircraft for the U.S. Navy.”

**Details on DARPA ANCILLARY:**  
DARPA's ANCILLARY program aims to develop and flight demonstrate an X-plane with the critical technologies required for a leap-ahead in long endurance, VTOL unmanned air system (UAS) performance. The UAS would be able to launch and recover from ship flight decks and small austere land locations in adverse weather without additional infrastructure equipment, thus enabling expeditionary deployments. Unlike large VTOL systems, the small UAS size would allow many aircraft to be stored and operated from one ship creating a tactical beyond-line-of-site, multi-intelligence sensor network capability.

Northrop Grumman is a leading global aerospace and defense technology company. Our pioneering solutions equip our customers with the capabilities they need to connect and protect the world, and push the boundaries of human exploration across the universe. Driven by a shared purpose to solve our customers’ toughest problems, our 95,000 employees define possible every day.

**37 . Date: 14-07-2023Solar ISR / ISTAR - HALE - General - PlatformPHASA-35 Completes 1st Successful Stratospheric FlightURL: https://www.asdnews.com/news/defense/2023/07/14/phasa35-completes-1st-successful-stratospheric-flight**

British engineers have successfully completed a stratospheric flight trial of BAE Systems’ High Altitude Pseudo Satellite (HAPS) Uncrewed Aerial System (UAS) - PHASA-35.

Over a 24-hour period, PHASA-35 soared to more than 66,000 feet, reaching the stratosphere, before landing successfully.  The trial, completed last month in New Mexico in the USA, allowed engineers to assess the performance of the experimental solar-electric drone within the outer-reaches of the planet’s atmosphere.

The flight marks a significant milestone in PHASA-35’s development which began in 2018. Designed by BAE Systems’ subsidiary Prismatic Ltd to operate above the weather and conventional air traffic, it has the potential to provide a persistent and stable platform for various uses including ultra-long endurance intelligence, surveillance and reconnaissance, as well as security.

It also has the potential to be used in the delivery of communications networks including 4G and 5G and could be used in a wide range of applications, such as disaster relief and border protection, as an alternative to traditional airborne and satellite systems.

The PHASA-35 programme sits within FalconWorks™, a new centre for advanced and agile research and development within BAE Systems’ Air sector, designed to deliver a range of cutting-edge combat air capabilities to the UK and its allies.

PHASA-35, which has a 35-metre wingspan and carries a 15kg payload, uses a range of world-leading technologies including advanced composites, energy management, solar electric cells and photo-voltaic arrays to provide energy during the day which is stored in rechargeable cells to maintain ?ight overnight.

The successful trial assessed the performance of the experimental system across a range of areas.  It is the first in a series of trials planned to confirm system performance, support development activities and validate test points to enable PHASA-35 to be made available in defence and commercial markets internationally.

"This is a fantastic achievement for everyone involved and shows the commitment of BAE Systems to invest in new technologies and markets. PHASA-35’s first stratospheric flight demonstrates that this vehicle is on track to become the go-to system for long endurance, high altitude and communications applications in the future. The successful trials are a testament to the hard work of the fantastic team that we have built over the last couple of years within Prismatic and across our partner companies including Piran, Amprius, Microlink, Honeywell, PMW Dynamics and the Met Office. I look forward to the next steps as we develop this unique system." Dave Corfield, CEO of Prismatic Ltd

"PHASA-35 is breaking new ground - opening up the stratosphere to new possibilities. The team, which brings together BAE Systems’ know-how from across the globe with innovative solar and power management technologies, demonstrated tremendous commitment and ambition as they tackled the challenges associated with novel technologies and approaches. This partnership approach is key to our ability to enhance our defence expertise with new thinking and technologies." Cliff Robson, Group Managing Director for BAE Systems’ Air Sector

The latest trials took place from Spaceport America in New Mexico, flying in the White Sands Missile Range, and are sponsored by the US Army Space and Missile Defense Command Technical Center. This test flight at White Sands Missile Range was coordinated and directly supported by personnel attached to Naval Surface Warfare Center, Port Hueneme Division, Detachment White Sands.

**38 . Date: 25-07-2023ISR / ISTAR - Micro - Contract - Teledyne FLIR Defense Wins $94M IDIQ Contract from US Army for Black Hornet 3 Nano-DronesURL: https://www.asdnews.com/news/defense/2023/07/25/teledyne-flir-defense-wins-94m-idiq-contract-us-army-black-hornet-3-nanodrones**

* **Total Army investment in Black Hornet likely to exceed $225 million by 2028**

Teledyne FLIR Defense, part of Teledyne Technologies Incorporated (NYSE:TDY), has won a five-year Indefinite Delivery, Indefinite Quantity (IDIQ) contract worth up to $93.9 million to provide its Black Hornet® 3 Personal Reconnaissance Systems (PRS) to the United States Army. The initial award under this IDIQ will cover delivery of the nano-unmanned aerial systems (UAS), as well as controllers, spare parts, and training.

In 2018 the U.S. Army began acquiring Black Hornet 3’s as part of its Soldier Borne Sensor (SBS) program. Since then, the Army has placed orders totaling more than $125 million for the multi-faceted drone. Soldiers are using the advanced nano-UAVs to augment squad and small unit surveillance and reconnaissance capabilities.

Weighing just 33 grams, nearly silent, and with a flight time up to 25 minutes, the combat-proven, pocket-sized Black Hornet PRS transmits live video and HD still images back to the operator. Well suited for operations in contested environments, the Black Hornet provides soldiers with immediate covert situational awareness to help them perform missions more safely and effectively.

Black Hornet drones are currently being used by Ukrainian forces through donations made by the British and Norwegian governments. This month, Norway’s Ministry of Defense ordered 1,000 more UAS systems. They have performed successfully in numerous operations under the harshest of environments. FLIR Defense has delivered more than 20,000 Black Hornet PRS systems to military and security forces in over 40 countries.

“The Black Hornet 3 gives warfighters up-to-the-minute situational understanding before and while they conduct missions,” said Dr. JihFen Lei, executive vice president and general manager of FLIR Defense. “We are proud to provide this unique capability to our soldiers and honored by the U.S. Army’s long-term commitment through the new IDIQ, building on its previous orders under the SBS program.

“FLIR Defense will continue to invest in developing unmanned platforms and smart sensors that are proving their worthiness in operational theaters worldwide,” Lei added. “These technologies are reshaping the modern battlefield.”

The award-winning Black Hornet 3 is designed and built by FLIR Defense in Norway.

**39 . Date: 02-08-2023General - Detect & AvoidSafe Integration of Drones Into Airspace is Getting CloserURL: https://www.asdnews.com/news/defense/2023/08/02/safe-integration-drones-into-airspace-getting-closer**

* **HENSOLDT commissioned with a demonstrator study for Detect-and-Avoid Radar**

Sensor solutions provider HENSOLDT is taking the development of its collision warning system for civil and military drones to a new level. The demonstrator study for a "detect-and-avoid radar" – commissioned by the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) – enables a further step towards the safe integration of drones into controlled airspace.

The German customer has drawn up requirements for an investigation into the implementation of a gradual and full-scale airspace integration of the EURODRONE. For this, a DAA system is foreseeably necessary, which is to be advanced in a gradual series development.

In the run-up to this future development of a DAA system, HENSOLDT - as a long-standing partner of the German Armed Forces in the field of radar technology – has carried out risk-minimising national and European studies regarding the conception and design of a special radar sensor system for such a DAA system. The flight test campaigns carried out and the results obtained in the course of these studies in preparation for development are already proving the functional capability.

The "detect-and-avoid radar" is one of the decisive sensors in a complex DAA system on board unmanned aerial vehicles. It supports the calculation of evasive manoeuvres for collision avoidance by detecting, classifying and forming complete tracks of approaching objects in the airspace. Due to the multifunctional design of this radar, the requirements for integrating a weather radar function will also be taken into account and a possible perspective regarding the support of a separate landing aid will be opened up.

The currently commissioned study for the DAA radar includes the investigation of the technical feasibility of such a radar for the EURODRONE project, the verification with a near-series demonstrator as well as the risk minimisation for a future series development. Since the novel "detect-and-avoid radar" is a flight- and mission-critical component, the study deals in particular with the implementation of the safety requirements and the approval strategy at national and international aviation safety authorities (EASA, LBA) as well as the military organisations (LufABw).

**40 . Date: 04-08-2023Armed ISR / ISTAR - MALE - General - PlatformGA-ASI Mojave STOL UAS Completes First Dirt OperationURL: https://www.asdnews.com/news/defense/2023/08/04/gaasi-mojave-stol-uas-completes-first-dirt-operation**

* **Mojave Demonstrates Takeoff and Landing Versatility on Unimproved Surface**

On August 1, 2023, General Atomics Aeronautical Systems, Inc. (GA-ASI) completed multiple successful takeoffs and landings with its Mojave Unmanned Aircraft System (UAS) on a dirt strip near El Mirage, Calif.

The ability to take off and land on unimproved surfaces demonstrates Mojave’s departure from traditional fixed-wing aircraft’s dependance on prepared runways. This new capability provides greater versatility and allows the aircraft to operate in areas previously deemed unsuitable for UAS operations.

“Being able to execute missions in austere locations with runway independence opens the operational envelope for commanders across all services and geographic locations,” said GA-ASI President David R. Alexander. “Mojave can do this while retaining significant advantages in endurance and persistence over Vertical Takeoff and Landing (VTOL) and manned aircraft.”

The flight tests were the first-ever Short Takeoff and Landing (STOL) on a dirt surface for Mojave. Takeoffs were performed in as little as 586 feet; and short landings were completed in as little as 335 feet. The tests were primarily focused on gathering terrain feedback using Mojave, not achieving the shortest distances possible.

Tracing its lineage from the MQ-1C Gray Eagle and MQ-9 Reaper, Mojave is a technical demonstrator with STOL capability, making it a versatile expeditionary UAS. Adhering to Modular Open System Approach (MOSA) principles, Mojave leverages the modernized avionics, data links, sensor integration, and laptop ground control station of GA-ASI’s Gray Eagle 25M program. These features – along with Mojave’s enlarged wings with high-lift devices, combat-proven 450-HP turbine engine, and ruggedized landing gear – make it ideal for semi-improved surfaces with a small ground support footprint.

Mojave provides options for forward-basing operations without the need for typical airport runways or infrastructure, so it can be rapidly deployed from and recovered to non-traditional discrete locations. To extend operational reach, Mojave can fit into a C-130 and be rapidly assembled and employed. These innovations make Mojave the perfect UAS to perform Reconnaissance, Surveillance, and Target Acquisition (RSTA), attack, and contested logistics support missions.

Designed to be rapidly deployable and expeditionary, Mojave’s tailored features include a ruggedized airframe that enables operations in austere conditions and weatherization that enables flight in wider environmental windows. Robust wing storage means it can carry up to 16 Hellfire or equivalent missiles, assorted munitions, Launched Effects (LEs), or logistical resupply pods. Mojave can provide greater operational flexibility while still being equipped with a multi-sensor suite that includes Electro-Optical/Infrared (EO/IR), Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI), Electronic Intelligence (ELINT), and Signals Intelligence (SIGINT) to support land or maritime missions throughout Joint All-Domain Operations (JADO).

**41 . Date: 09-08-2023ISR / ISTAR - Small - Contract - Textron Systems Awarded UAS Contractor-Owned/Contractor-Operated Contract For 3 LCS By US NavyURL: https://www.asdnews.com/news/defense/2023/08/09/textron-systems-awarded-uas-contractorownedcontractoroperated-contract-3-lcs-us-navy**

* **Aerosonde Uncrewed Aircraft System (UAS) Supporting Seventh U.S. Navy Ship with Extended Range ISR Services**

Textron Systems Corporation, a Textron Inc. (NYSE:TXT) company, announced today that it has been awarded an initial contract valued at up to $19.5 million by the U.S. Navy’s Naval Air Systems Command (NAVAIR) to provide UAS operational support to two Independence Class LCS and one Freedom Class LCS variants. This award joins the Expeditionary Sea Base (ESB)-4 and ESB-5, as well as two DDG- class ships, bringing the total number of U.S. Navy ships supported by the Aerosonde® UAS system to seven.

Textron Systems will deploy its Aerosonde UAS to provide mission overwatch and extended intelligence, surveillance and reconnaissance (ISR) services with enhanced mission payloads as seen aboard the ESB-5.

“Contractor-owned/contractor-operated contracts like this support the Navy’s continued investments in uncrewed assets for their ships,” said Wayne Prender, Senior Vice President, Air Systems. “We’ve seen the benefits of our Aerosonde UAS for DDG and ESB- class ships already, and we’re honored to be expanding into this new ship class, allowing us to continue supporting maritime domain awareness and missions while delivering operational and logistical capabilities.”

The Aerosonde system continues to set the standard for mission readiness and ease of use, amassing more than 600,000 flight hours serving multiple U.S. customers and allies. It is designed for expeditionary land- and sea-based operations with both fixed-wing and vertical takeoff and landing (VTOL) options. Textron Systems has provided turnkey, UAS operations for customers around the world for more than 10 years.

**42 . Date: 10-08-2023Armed ISR / ISTAR - HALE - General - SoftwareGA-ASI Advances Ecosystem for Autonomously Operational UCAVURL: https://www.asdnews.com/news/defense/2023/08/10/gaasi-advances-ecosystem-autonomously-operational-ucav**

* **Combining Third-Party Autonomy Skills and Government FoX Tablets for Unmanned Combat Air Vehicles to Operationalize Manned-Unmanned Teaming**

General Atomics Aeronautical Systems, Inc. (GA-ASI) advanced its ability to operationalize the Unmanned Combat Air Vehicle (UCAV) ecosystem by combining advanced autonomy and government-provided human-machine interface (HMI) hardware. A GA-ASI-owned Avenger® Unmanned Aircraft System (UAS) was paired with “digital twin” aircraft to autonomously conduct Live, Virtual, and Constructive (LVC) multi-objective collaborative combat missions.

The flights, which took place on July 13, 2023, from GA-ASI’s Desert Horizon Flight Operations Facility in El Mirage, Calif., demonstrate the company’s commitment to maturing its UCAV ecosystem for Autonomous Collaborative Platforms (ACP). The ecosystem’s goal is to rapidly integrate best-of-breed capabilities in areas such as Artificial Intelligence (AI), mission-relevant interfaces, and other capabilities from third-party providers at the speed of relevance for 21st century conflicts.

The team demonstrated Manned-Unmanned Teaming (MUM-T) using the U.S. Air Force’s Project FoX system, which included a touchscreen tablet for fighter cockpits. The tablet provided control and monitoring of advanced autonomy while it conducted a multi-objective combat mission consisting of LVC entities. Mission autonomy capabilities focused on optimized search and signature management. Search optimization autonomy behaviors were provided by Scientific Systems Company, Inc. (SSCI). These skills were integrated into and orchestrated by government-furnished equipment (GFE) autonomy core architecture enhanced by GA-ASI. The flexibility of the GFE autonomy core software stack enabled rapid, seamless integration of one of SSCI’s multi-UAS behaviors. Autonomous trajectories were calculated by SSCI algorithms and subsequently communicated to GA-ASI’s autonomy core for translation to vehicle routes. SSCI provided an array of behaviors using its Collaborative Mission Autonomy suite where the software adapts to mission contingencies such as system failures, connectivity dropout, and combat losses to ensure successful tactical execution.

“The concepts demonstrated by these flights set the standard for operationally relevant mission systems capabilities on UCAV platforms,” said GA-ASI Senior Director of Advanced Programs Michael Atwood. “Our integration of the emerging FoX system accelerates speed to ramp for emerging collaborative air-to-air capabilities. The combination of airborne high-performance computing, sensor fusion, human-machine teaming, and AI pilots making decisions at the speed of relevance shows how quickly GA-ASI’s capabilities are maturing as we move to operationalize autonomy for UCAVs.”

The signature management skill, based on deep reinforcement learning, was developed by GA-ASI. Skill development leveraged GA-ASI’s novel Reinforcement Learning (RL) architecture that was designed using agile software methodology and industry-standard tools such as Docker and Kubernetes. Commanded using the FoX tablet, the RL agent navigated to an operator-identified target while minimizing the radar cross section (RCS). This MUM-T, facilitated via open mission system (OMS) messages and alignment to the newest government architectures, demonstrated real-time operator tasking and supervision of an autonomous platform as it conducted its mission.

The team used a government-furnished autonomy core engine and the government-standard OMS messaging protocol to enable communication between the RL agents and the LVC system. Utilizing government standards such as OMS will make rapid integration of autonomy for UCAVs possible. In addition, GA-ASI used a General Dynamics EMC2 to run the autonomy architecture. EMC2 is an open architecture Multi-Function Processor with multi-level security infrastructure to run the autonomy architecture, demonstrating the ability to bring high-performance computing resources to UCAVs to perform quickly tailorable mission sets depending on the operational environment.

GA-ASI is demonstrating its commitment to maturing an autonomy infrastructure to enable rapid integration and validation of third-party tactical software applications from an App Store and maintaining safety of flight. This is another in an ongoing series of autonomous flights performed by GA-ASI using internal research and development funding to prove out important AI/ML concepts for UAS.

**43 . Date: 23-08-2023Acquisition - AeroVironment to Acquire Tomahawk RoboticsURL: https://www.asdnews.com/news/defense/2023/08/23/aerovironment-acquire-tomahawk-robotics**

* **AeroVironment's unmanned systems paired with Tomahawk Robotics' AI-enabled technology will allow warfighters to operate various connected robotic solutions in the battlefield and share information between multiple domains with one common controller**

AeroVironment has announced its anticipated acquisition of Tomahawk Robotics, a leader in AI-enabled robotic control systems. The acquisition will enable deeper integration of both companies’ technology, leading to enhanced interoperability and interconnectivity of unmanned systems through a singular platform with similar control features. This will ultimately enable warfighters to operate various connected robotic solutions in the battlefield and share information between multiple domains with one common controller. The two companies entered into a definitive agreement under which AeroVironment will acquire 100% of Tomahawk Robotics equity for a total purchase price of $120 million to be paid in a mix of cash and stock.

Founded by Brad Truesdell and Matt Summer in 2018, Tomahawk Robotics is the visionary force behind the groundbreaking Kinesis Ecosystem, an unmatched tactical capability designed for the warfighter first. At the heart of this innovation lies Kinesis, an AI-enhanced and open architecture common control system that seamlessly integrates the network of battle-proven unmanned expeditionary vehicles, sensors, and third-party software onto a single pane of glass. Powered by innovation, the Kinesis Ecosystem delivers targeted situational awareness and precision strike capabilities for the human-machine teams across the battlespace.

“The acquisition of Tomahawk Robotics will not only provide AeroVironment with strong new members of our team, but a quality brand and products that are widely respected in the industry. Tomahawk Robotics will become part of the small UAS (SUAS) business unit within AeroVironment’s Unmanned Systems segment. We intend to retain all of their workforce and existing facilities in Florida,” said AeroVironment’s CEO and Chairman Wahid Nawabi. “We will support all existing Tomahawk Robotics customers and their products will remain platform agnostic to the market and within the industry. We also plan to introduce Tomahawk Robotics solutions to AeroVironment’s growing network of more than 55 allied nations.”

“Combining features of our Crysalis operating system with Tomahawk Robotics’ AI-enhanced Kinesis platform means pairing the best common controller technology with the most ubiquitous unmanned systems on the market today,” said AeroVironment’s Senior Vice President of Unmanned Systems Trace Stevenson. Tomahawk Robotics’ Kinesis control system was integrated into AeroVironment’s small unmanned aircraft family of systems including Raven® B and Puma™ 3 AE in 2022.

“Tomahawk Robotics’ solutions will accelerate our adoption and implementation of AI and autonomy into AeroVironment platforms,” continued Stevenson. “We’re confident that the combined experience and expertise of our two teams will result in a variety of unmatched unmanned expeditionary vehicles that meet our customers’ emerging needs and exacting standards.”

“Our motto has always been ‘warfighter first.’ Everything we’ve designed or made has been optimized to better equip and prepare soldiers on the battlefield,” said Tomahawk Robotics’ CEO Brad Truesdell. “Joining AeroVironment means our solutions will have a broader reach and the opportunity to be optimized by not only AeroVironment’s family of systems, but the broader robotics community, better enabling warfighters across the globe.”

“Acquiring Tomahawk Robotics strengthens our value to our customers as we will be uniquely qualified to support multiple platforms and offer the best solution for their operational needs,” continued Nawabi. “Tomahawk Robotics’ products will enable AeroVironment’s solutions to achieve an elevated Modular Open System Approach (MOSA) desired by our customers, and the opportunity to expand into new and adjacent markets for interconnected soldiers with a Common Operating Picture enabled by AI and autonomy.”

**45 . Date: 07-09-2023ISR / ISTAR - Small - General - ArmamentInsitu Announces Kinetic Capability for the Integrator Uncrewed Aircraft System (UAS)URL: https://www.asdnews.com/news/defense/2023/09/07/insitu-announces-kinetic-capability-integrator-uncrewed-aircraft-system-uas**

Insitu, A Boeing Company, announced a munitions program for its Integrator UAS, which adds a highly sought-after strike capability to the platform’s unmatched payload portfolio and class-leading 24-hour flight endurance.

Insitu collaborated with multiple weapons developers and U.S. Government agencies to enable the Integrator to deliver miniature, precision munitions and guide them to their targets. During September 2021, the RQ-21 Blackjack variant of the Integrator successfully delivered various inert kinetic payloads for a U.S. Navy test program. Testing of additional munitions remains underway.

“Based on global events and the evolution of the modern battlefield, Insitu’s customers are demanding a kinetic strike capability,” said Vice President of Global Growth Abigail Denburg. “To meet this demand, we are actively partnering to test a variety of kinetic capabilities for the Integrator UAS, which will shorten the time from detection and identification to execution,” said Denburg.

Integrator’s unique modular design enables it to carry multiple payloads during the same mission. It is a NATO Class 1 Small UAS (DoD Group 3 UAS) that carries up to 25 percent of its maximum gross takeoff weight as payloads distributed among its nose, payload bay, two wing trays, and two wing-mounted hardpoints. The nose is typically equipped with one of several intelligence, surveillance, and reconnaissance (ISR) turrets while the payload bay typically carries a synthetic aperture radar, a wide-area motion imagery sensor, a wide area maritime surveillance sensor, a communications relay payload, or one of several signals intelligence/electronic warfare payloads, which can be easily swapped in the field using common hand tools. Each of the munitions were developed as modular, self-contained payload bays that include the weapon(s) and the stores management system.

“This modular capability builds on Integrator’s unique design and enables our end users to easily transition between kinetic and non-kinetic missions” added Denburg.

Insitu will showcase some of these capabilities at MSPO in Kielce, Poland from September 5-8 and at DSEI in London, England from September 12-15.

With three decades of experience, more than 3,500 uncrewed aircraft manufactured to date, and more than 1.4 million operational flight hours, Insitu continues to deliver the most advanced capabilities available to our global customer base in more than 35 countries and counting.

**46 . Date: 15-09-2023Armed ISR / ISTAR - MALE - Pitch - Canada - MQ-9B Integrated SystemsURL: https://www.asdnews.com/news/defense/2023/09/15/canada-mq9b-integrated-systems**

WASHINGTON, September 15, 2023 - The State Department has made a determination approving a possible Foreign Military Sale to the Government of Canada of munitions and other systems to be integrated into MQ-9Bs for an estimated cost of $313.4 million. The Defense Security Cooperation Agency delivered the required certification notifying Congress of this possible sale today.

The Government of Canada has requested to buy munitions and other systems to be integrated into MQ-9Bs purchased through Direct Commercial Sales, to include: twelve (12) AN/APY-8 Lynx Synthetic Aperture radars; two hundred nineteen (219) AGM-114R2 Hellfire II missiles; eighteen (18) KMU-572 tail kits for the GBU-38 Joint Direct-Attack Munition (JDAM) and GBU-54 Laser JDAM (LJDAM); twelve (12) Mk82 500-lb General Purpose (GP) bombs; and six (6) Mk82 Filled Inert bombs. Also included are Due Regard Radars; SAGE 750 and SNC 4500 Electronic Surveillance Measures Systems; AN/ARC-210 radios; Compact Multi-Band Data Link (CMDL); KY-100M Narrowband/Wideband Terminals; KOR-24A Small Tactical Terminals; High-Bandwidth Compact Telemetry Modules (HCTM); KIV-77 cryptographic appliques and other Identification Friend or Foe (IFF) equipment; AN/PYQ-10C Simple Key Loaders (SKL); Common Munitions Built-In-Test/Reprogramming Equipment (CMBRE); FMU-139 Joint Programmable Fuses (JPF); M299 Hellfire launchers and training missiles; DSU-38 Precision Laser Guidance Sets; classified publications and technical documentation; munitions support and support equipment; secure communications, precision navigation, and cryptographic equipment; spare and repair parts, consumables, accessories, and repair and return support; unclassified software delivery and support; testing and integration support and equipment; maps and charts; personnel training and training equipment; transportation support; warranties; studies and surveys; Contractor Logistics Support (CLS); U.S. Government and contractor engineering, technical, and logistics support services; and other related elements of logistics and program support. The estimated total cost is $313.4 million.

This proposed sale will support the foreign policy and national security objectives of the United States by helping to improve the military capability of Canada, a NATO ally that is an important force for ensuring political stability and economic progress, and a contributor to military, peacekeeping and humanitarian operations around the world.

The proposed sale will improve Canada’s capability to meet current and future threats by enabling unmanned surveillance and reconnaissance patrols of its northern arctic territories. It will also enable Canada to optimally fulfill its North American Aerospace Defense (NORAD) and NATO missions while increasing interoperability with U.S. and NATO forces. Canada will have no difficulty absorbing these articles and services into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The principal contractor will be General Atomics Aeronautical Systems, Poway, CA. The purchaser typically requests offsets. Any offset agreement will be defined in negotiations between the purchaser and the contractor.

Implementation of this proposed sale will not require the assignment of any additional U.S. Government or contractor representatives to Canada.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

The description and dollar value are for the highest estimated quantity and dollar value based on initial requirements. Actual dollar value will be lower depending on final requirements, budget authority, and signed sales agreement(s), if and when concluded.

**47 . Date: 11-10-2023Loitering Munition - General - PlatformGA-ASI Advances Aerial Recovery for SUAS and ALEURL: https://www.asdnews.com/news/defense/2023/10/11/gaasi-advances-aerial-recovery-suas-ale**

General Atomics Aeronautical Systems, Inc. (GA-ASI) recently advanced its Aerial Recovery System for Small Unmanned Aircraft Systems/Air-Launched Effects (SUAS/ALE) by deploying and retracting a towline with a “smart end feature” from a GA-ASI MQ-20 Avenger® Unmanned Aircraft System in flight. The demonstration took place on Sept. 20, 2023, over Dugway Proving Ground, Utah.

During this demonstration, a hoist from Breeze-Eastern equipped with GA-ASI’s smart end feature was integrated into Avenger’s payload bay. While in flight, the towline was deployed away from Avenger to the optimal distance for aerial recovery. The smart end feature was able to wirelessly transmit its position back to Avenger, confirming its ability to transmit the data to a nearby SUAS/ALE for aerial recovery. The smart end feature’s “deployed” position correlated to GA-ASI’s multi-degree-of-freedom finite element catenary models, confirming its potential for SUAS/ALE aerial recovery.

“Integrating air-launched UAS from Group 5 unmanned aircraft is possible, in part, thanks to advances in relative navigation technology, complex towline analysis, and multi-aircraft control being pioneered by GA-ASI,” said Mike Atwood, Vice President of Advanced Programs at GA-ASI. “We are excited to see this technology enable long-range kill chains from today’s manned and unmanned systems supporting operations in highly contested environments.”

Beyond just captive carry back to base, the SUAS/ALE can be refueled, recharged, and/or rearmed and then redeployed. Redeployment can occur from the host aircraft, enabling SUAS/ALEs to conduct their own orbits from airborne launch and recovery positions. Aerial redeployment allows UAS like GA-ASI’s Avenger or MQ-9A Reaper to serve as mobile command centers for a network of SUAS/ALEs in a persistent, expansive grid for surveillance, electronic attack, enemy air defense suppression, communication pathways, or joint all-domain mobile command and control for days or weeks at a time.

Breeze-Eastern’s commercial-off-the-shelf helicopter rescue hoists, with performance capabilities that meet or exceed system requirements, provide a high Technology Readiness Level (TRL), and offer a low-risk solution to ensure SUAS/ALE aerial recovery. Throughout the hoist integration and flight testing, Breeze-Eastern provided technical and logistical support.

Ian Azeredo, Breeze-Eastern’s Chief Engineer, commented, “With this milestone demonstration, GA-ASI has once again awed the aerospace industry. The professionalism and surgical ingenuity shown in the integration phase by the Aerial Recovery team all but guarantee future program success.”

The novel aerial recovery concept utilizes a towline and smart end feature, which serves as a beacon and mechanical interface for aerial recovery. The SUAS/ALE calculates its precise position relative to the smart end feature for navigation into towline intercept, followed by a maneuver to capture the end feature. Once secure on the towline, the SUAS/ALE folds its wings and stops its engine to transition into a passively stable towed body. A podded hoist aboard the capital ship reels in the SUAS/ALE to a captive carriage state where the two platforms return to base together.

**48 . Date: 20-10-2023Partnership - ArmamentInsitu and Innovaero to Develop Unmanned Aerial Attack SystemsURL: https://www.asdnews.com/news/defense/2023/10/20/insitu-innovaero-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 its 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.

**49 . Date: 08-11-2023ISR / ISTAR - Small - General - PlatformAeroVironment's JUMP 20 Medium UAS Demos Maritime Autonomous Takeoff and Landing at Vessel Speeds Over 20 KnotsURL: https://www.asdnews.com/news/defense/2023/11/08/aerovironments-jump-20-medium-uas-demos-maritime-autonomous-takeoff-landing-at-vessel-speeds-over-20-knots**

AeroVironment, Inc (NASDAQ: AVAV) today announced the company’s JUMP 20 VTOL Medium UAS exceeded expectations during the recent U.S. Naval Forces Southern Command/4th Fleet Hybrid Fleet Campaign Event (HFCE) that demonstrated human-machine teaming in the maritime domain. The JUMP 20 provided ship-based intelligence, surveillance, reconnaissance, and targeting (ISR-T) support to USFOURTHFLT and USSOUTHCOM during the week-long, at-sea exercise onboard USNS Burlington. The JUMP 20 has previously flown over 130,000 land-based hours in support of U.S. Special Operations Command combat deployments, and the expansion of JUMP 20 operations into the shipboard environment allows AeroVironment to provide these services globally.

During HFCE, JUMP 20 showcased its ability to launch and recover at vessel speeds over 20 knots, with fully autonomous flight from takeoff to landing.  The JUMP 20 requires neither launch or recovery equipment, nor personnel on the flight deck during launch and recovery, maximizing operational safety and flexibility for users. JUMP 20’s vertical takeoff and landing (VTOL) capability, and class-leading endurance and payload capacity expand the operational capabilities of U.S. and allies to compete and win in the era of great power competition.  The JUMP 20 demonstrated how uncrewed systems will support distributed operations across multiple domains, supporting national security objectives and our warfighters.

“The shipboard flight environment is dynamic and challenging. JUMP 20 is a proven combat-effective platform, and the system's performance during HFCE illustrates the value to maritime operations.  JUMP 20’s ability to launch and land at speed, and without personnel intervention, enhances the ship’s operational effectiveness and enables operators to focus on important mission tasking,” said Shane Hastings, AeroVironment’s vice president and product line general manager for Medium UAS. “As we continue to demonstrate and prove the effectiveness of the JUMP 20 platform, we look forward to getting this capability in the hands of our sailors, Marines, and allies operating in the maritime environment.” AeroVironment JUMP 20 is deployed to U.S. and allied militaries around the world, and it can be provided on a contractor-owned / contractor-operated (COCO) basis to maximize operational flexibility.

**50 . Date: 13-11-2023ISR / ISTAR - HALE - General - Australia's 1st MQ-4C Triton Takes FlightURL: https://www.asdnews.com/news/defense/2023/11/13/australias-1st-mq4c-triton-takes-flight**

Northrop Grumman Corporation (NYSE: NOC) successfully completed the first flight of Australia’s multi-intelligence MQ-4C Triton uncrewed aircraft on Thursday, Nov. 9 at its Palmdale Aircraft Integration Center in California. The flight marks a major production milestone as Northrop Grumman progresses toward delivery of Australia’s first Triton in 2024.

* Built for the U.S. Navy and Royal Australian Air Force, the multi-intelligence MQ-4C Triton is the only uncrewed, high-altitude, long-endurance aircraft performing persistent maritime intelligence, surveillance, reconnaissance and targeting.
* The first flight occurred at 11:56 a.m. PST with total flight time of approximately 6 hours and 24 minutes. Airworthiness evaluations, such as engine, flight control and fuel system checks, and basic aircraft handling tests were conducted.
* In September, the Australian government announced the addition of a fourth aircraft that will enhance the resilience of their fleet and provide superior surveillance capability to monitor and protect Australia’s maritime interests 24/7.

**Experts:**  
Christine Zeitz, chief executive and general manager Australia & New Zealand, Northrop Grumman: “We are leveraging our deep expertise in uncrewed high-altitude long endurance aircraft to enable Australia to establish a superior long range maritime surveillance capability to monitor and protect Australia’s maritime interests 24/7.”

Air Marshal Robert Chipman, Chief of the Royal Australian Air Force: “Triton expands Australia’s intelligence, surveillance and reconnaissance capability by providing reliable real-time intelligence and situational awareness. Persistent surveillance enables better planning, greatly enhancing joint military responses and operations.”

**Details on Program:**  
The multi-intelligence MQ-4C Triton uncrewed aerial system achieved a declaration of initial operating capability (IOC) by the U.S. Navy on Aug. 3, 2023.

Australia’s role in the Triton cooperative program was critical to shaping its system requirements. Together, U.S. and Australian defense forces will be able to share data collected by their respective Tritons, a critical ability in one of the world’s most strategically important regions.

Australia’s security challenges run the spectrum of humanitarian and disaster relief to maritime monitoring of the vital sea lanes in the Indo-Pacific. With all four Australian Tritons currently under contract progressing as planned through their production schedules, the systems will have a vital role to play with sensors and communication nodes that can facilitate the transfer of data across warfighting domains and various mission needs.

**51 . Date: 23-11-2023Partnership - Centaurium UAS and Thales Join Forces to Open Swiss Skies to Long-range Drone OperationsURL: https://www.asdnews.com/news/defense/2023/11/23/centaurium-uas-thales-join-forces-open-swiss-skies-longrange-drone-operations**

* **Centaurium UAS and Thales have signed a cooperation agreement to conduct a test campaign with a view to authorising the use of Thales's UAS100 drone for long-range operations in Switzerland.**
* **The UAS100 is ideal for civil and governmental monitoring, surveillance and alert missions.**
* **Combining world-class flight safety performance with the compact design required for drones, the Thales system has an operating range of more than 100 km and complies with certification criteria for flying over populated areas.**
* **A subsidiary of Switzerland-based Centaurium Group, a specialist in helicopter operations, Centaurium UAS will be responsible for drone qualification flights, and plans to provide drone services with optimised operating costs and environmental impact to Swiss authorities and industry players.**

On 22 November 2023, Centaurium UAS and Thales signed a cooperation agreement which also comprises the delivery of two Thales UAS100 drone systems and ground control stations to the Switzerland-based company ahead of testing in the spring of 2024 and the planned start of commercial operations in 2025.

From risk monitoring on large-scale infrastructure to border surveillance, event security, fire detection and location of missing persons, the UAS100 meets the requirements of a wide range of mission scenarios while operating in full compliance with general aviation regulations.

Centaurium UAS will operate the drones and offer services tailored to the specific needs of public and private players in Switzerland, with lower operating costs and 90% lower energy consumption than current piloted aircraft.

Centaurium UAS is positioned as a service provider for monitoring, surveillance and alert missions. Use cases include inspection of critical infrastructure and industrial installations such as high-voltage lines and transport routes, monitoring of natural disasters, border surveillance and security for major events, as well as flights to locate missing persons and provide situational awareness in support of search and rescue and other emergency operations. Centaurium UAS will rely on Thales’s UAS100 technology for the necessary flight avionics, benefitting from its highly robust design, built-in security, versatility and scalability, and a latest-generation ground control station that meets the criteria for European Union Aviation Safety Agency (EASA) certification.

The avionics of the UAS100 combines the certified levels of flight safety and security of Thales solutions for the aerospace sector with the lightweight and compact design needed for integration on a light UAV. With an aerostructure developed by light aircraft manufacturer Issoire Aviation, the UAS100 concept offers levels of performance, integrity and reliability with no equivalent in Europe.

The UAS100 is powered by two electric motors and a small internal combustion engine, ensuring the necessary endurance and resilience to failure. Equipped with a jam-resistant navigation system, a redundant computer for critical missions and a smart communication system, it can fly autonomously in complete safety. The UAS100 will be marketed in two versions: the UAS100-1, which is already available and has a wingspan of 3.34 metres, a length of 1.78 metres and a payload capacity of 1 kilogram; and the UAS100-10, which is twice the size and offers a payload capacity of 10 kg to accommodate very high-performance sensors.

The ground control station — the nerve centre for planning, control and supervision of drone operations — will be supplied to Centaurium UAS in November, with delivery of the first UAS100-1 in March 2024 for initial trials. Centaurium UAS plans to begin commercial operations in 2025, once authorisation is obtained from the Swiss Federal Office of Civil Aviation (FOCA).

“With Thales, we’re delighted to have found the ideal partner so we can operate on-demand long-range commercial drone services for our customers in the near future. The partnership agreement between Thales and Centaurium UAS marks the start of a new era for drone operations in Switzerland.” – Ernest Oggier, CEO, Centaurium UAS.

“Centaurium UAS isn't only a first customer but the ideal partner to optimise drone operations with a view to achieving system certification and offering commercial services with lower costs and environmental impact.” – Jean-Paul Ebanga, Vice President Flight Avionics, Thales.

**52 . Date: 28-11-2023Research - MALE - Contract - Bell Selected for Phase 1A of DARPA SPRINT X-Plane ProgramURL: https://www.asdnews.com/news/defense/2023/11/28/bell-selected-phase-1a-darpa-sprint-xplane-program**

Bell Textron Inc., a Textron Inc. (NYSE: TXT) company, has been selected to compete for the Defense Advanced Research Projects Agency (DARPA) Speed and Runway Independent Technologies (SPRINT) X-Plane program. The SPRINT program intends to design, build, and fly an X-Plane, an experimental aircraft to demonstrate enabling technologies and integrated concepts necessary for a transformational combination of aircraft speed and runway independence for the next generation of air mobility platforms. Phase 1A includes conceptual design, culminating in a formal Conceptual Design Review.

“Bell is honored to be selected for SPRINT and thrilled to support another X-plane, which will bring unprecedented speed to vertical lift aircraft,” said Jason Hurst, executive vice president, Engineering, Bell. “In our rich 85-year history, Bell has produced memorable X-planes, such as the Bell X-1 and XV-15, and expanded our VTOL aircraft capabilities. This contract award is a testament to Bell's ability to build on past successful high-speed aircraft programs while investing in new research to validate HSVTOL technology.”

Bell plans to leverage its extensive investment in High-Speed Vertical Takeoff and Landing (HSVTOL) technology to demonstrate advanced performance capabilities. Bell is currently conducting risk reduction testing at Holloman Air Force Base in New Mexico to demonstrate its folding rotor, integrated propulsion, and flight control technologies using a dedicated test article.

Bell’s HSVTOL technology blends the hover capability of a helicopter with the speed (400+ kts), range, and survivability of jet aircraft. Bell has developed high-speed vertical lift technology for more than 85 years, pioneering innovative VTOL configurations like the X-14, X-22, XV-3 and XV-15 for NASA, the U.S. Army and U.S. Air Force, and continues to build on its proven history of fast flight from the Bell X-1.

**53 . Date: 30-11-2023Armed ISR / ISTAR - MALE - Contract - Airbus Signs Contract With the Spanish MoD for the Acquisition of SIRTAP UASURL: https://www.asdnews.com/news/defense/2023/11/30/airbus-signs-contract-with-spanish-mod-acquisition-sirtap-uas**

Airbus has signed a contract with the Spanish Ministry of Defence for the development and acquisition of SIRTAP, a High Performance Tactical UAS that will reinforce the tactical capabilities of the Spanish Army and the Air and Space Force.

This contract includes a total of nine systems, each consisting of three unmanned aerial vehicles and one ground control station. Furthermore, two simulators will be supplied to train the Spanish Armed Forces.

“This new technological milestone in the tactical UAS segment together with the Spanish Ministry of Defence, will reinforce national sovereignty. SIRTAP will be fully developed in Spain, integrating national capabilities. However, thanks to its versatility and the use of ITAR-free components, we also expect it to play a key role on the international market,” said Jean-Brice Dumont, Head of Military Air Systems at Airbus Defence and Space.

SIRTAP, with a payload of more than 150kgs, has been designed for advanced surveillance, intelligence and reconnaissance missions, both over land and at sea. A range of more than 2,000km and an endurance of more than 20 hours will provide high flexibility and reactivity, allowing for day and night operations in the most demanding environments. The system will be certified to fly in segregated airspace.

In the future, this tactical UAS will be able to operate jointly with other platforms to be integrated into a system of systems. The development of SIRTAP will bring the national industry key experience and competences in the field of Remote Carriers for FCAS.

First flight of the SIRTAP prototype is expected to take place in 2025.

**54 . Date: 15-12-2023ISR / ISTAR - Mini - Contract - Red Cat Holdings Selected by US Army as Finalist for Short Range Reconnaissance Tranche 2 Drone ProgramURL: https://www.asdnews.com/news/defense/2023/12/15/red-cat-holdings-selected-us-army-as-finalist-short-range-reconnaissance-tranche-2-drone-program**

* **Defense Innovation Unit and U.S. Army to provide $3 million in additional funding to support final program milestones**

Red Cat Holdings, Inc. (Nasdaq: RCAT) ("Red Cat'' or the "Company"), a drone technology company integrating robotic hardware and software for military, government, and commercial operations, announces that its subsidiary Teal Drones (Teal) has been selected by the Department of Defense’s (DoD) Defense Innovation Unit (DIU) and the U.S. Army as one of two finalists competing in the Short Range Reconnaissance Tranche 2 (SRR T2) Program of Record. As part of being named a finalist, Teal will be awarded $3 million of additional funding to support final prototype development and completion of remaining SRR milestones.

Teal was previously one of three drone manufacturers selected to develop a next-generation small unmanned aerial system (sUAS) designed for intelligence, surveillance, and reconnaissance (ISR) for the U.S. Army.   The ultimate goal of the SRR program is to provide small, rucksack portable sUAS capabilities to Army platoons (20-50 soldiers) for situational awareness beyond the next terrain feature.

“I’m excited to advance our collaboration with the U.S. Army as we seek to provide the ideal solution for SRR. We are grateful to have been selected as one of the two finalists in a program that began with more than 37 bidding vendors,” commented George Matus, founder of Teal and Red Cat’s Chief Technology Officer. “We’re developing our next generation product from the ground up to meet the highly specific requirements of SRR, with the mission of providing warfighters superhuman capabilities.”

Teal 2, the Company’s current flagship product, is built in Teal’s factory in Salt Lake City. It is an affordable, man-portable sUAS designed to “Dominate the Night™.” Teal 2 has a best-in-class night vision camera, fully modular design, multi-vehicle control, and artificial intelligence capabilities. The drone is designed to support U.S. military operations, public safety organizations, and U.S. government agencies in a variety of environments. It is both Blue UAS Certified, which indicates its approval by the Department of Defense, and FAA Remote ID approved.

**55 . Date: 04-01-2023Research - HALE - General - PlatformDARPA Moves Forward on X-65 Technology DemonstratorURL: https://www.asdnews.com/news/defense/2024/01/04/darpa-moves-forward-x65-technology-demonstrator**

* **In third phase of CRANE program, Aurora Flight Sciences will build X-plane with no moving control surfaces**

DARPA has selected Aurora Flight Sciences to build a full-scale X-plane to demonstrate the viability of using active flow control (AFC) actuators for primary flight control. The award is Phase 3 of the Control of Revolutionary Aircraft with Novel Effectors (CRANE) program.

In December 1903, the Wright brothers flew the world’s first fully controllable aircraft, which used wing warping to successfully achieve flight. Virtually every aircraft since then has used a system of movable, external control surfaces for flight control.

The X-65 breaks this century-old design paradigm for flight control by using jets of air from a pressurized source to shape the flow of air over the aircraft surface, with AFC effectors on several surfaces to control the plane’s roll, pitch, and yaw. Eliminating external moving parts is expected to reduce weight and complexity and to improve performance.

“The X-65 is a technology demonstrator, and it’s distinctive, diamond-like wing shape is designed to help us maximize what we can learn about AFC in full-scale, real-world tests,” said Dr. Richard Wlezien, DARPA’s program manager for CRANE.

The X-65 will be built with two sets of control actuators – traditional flaps and rudders as well as AFC effectors embedded across all the lifting surfaces. This will both minimize risk and maximize the program’s insight into control effectiveness. The plane’s performance with traditional control surfaces will serve as a baseline; successive tests will selectively lock down moving surfaces, using AFC effectors instead.

“The X-65 conventional surfaces are like training wheels to help us understand how AFC can be used in place of traditional flaps and rudders,” said Wlezien. “We’ll have sensors in place to monitor how the AFC effectors’ performance compares with traditional control mechanisms, and these data will help us better understand how AFC could revolutionize both military and commercial craft in the future.”

The 7,000+ pound, unmanned X-65 will have a 30-foot wingspan and be capable of speeds up to Mach 0.7. Its weight, size, and speed – similar to a military trainer aircraft – make the flight-test results immediately relevant to real world aircraft design.

“We’re building the X-65 as a modular platform – wing sections and the AFC effectors can easily be swapped out – to allow it to live on as a test asset for DARPA and other agencies long after CRANE concludes,” said Wlezien.

Aurora Flight Sciences has already started fabricating the X-plane; the X-65 is scheduled to be rolled out in early 2025 with the first flight planned for summer of the same year.

“It’s thrilling to be able to say, ‘we’re building an AFC X-plane," said Wlezien. “I came to DARPA in 1999 to work on a program called Micro Adaptive Flow Control, which help pioneer the foundational understanding of fluid dynamics that eventually led to CRANE. I left DARPA in 2003 after managing MAFC, and it’s the chance of a lifetime to come back and help see that early work come to fruition in a full-scale physical aircraft. Aerospace engineers live to see their efforts take flight.”

**56 . Date: 17-01-2024Armed ISR / ISTAR - HALE - General - SoftwareGA-ASI demos autonomy For UCAV using MQ-20 and waveform XURL: https://www.asdnews.com/news/defense/2024/01/17/gaasi-demos-autonomy-ucav-using-mq20-waveform-x**

* **GA-ASI Combines Waveform X Capabilities With Diverse DoD Autonomy Skills Providers to Advance Its UCAV Ecosystem**

General Atomics Aeronautical Systems, Inc. (GA-ASI) demonstrated its hardware-agnostic, open standards-based autonomy ecosystem for Unmanned Combat Air Vehicles (UCAVs) on a GA-ASI MQ-20 Avenger® as part of a live flight test on Nov. 13, 2023. The flight included three software-defined radios (SDRs) from L3Harris Technologies to support Line-of-Sight (LOS), command and control, and data movement capabilities via Waveform X.

One SDR, an L3Harris’ Pantera, was integrated into the MQ-20 unmanned aircraft, and a second was on the ground working in concert with a third L3Harris SDR, BANSHEE 2, which was on the ground as part of the Mission Control Element, forming an IP-based Mesh Network. The demonstration showcased Waveform X, a non-proprietary U.S. government-owned communications capability, and the ability to fly, flip, fly flight hardware as part of the Open Mission Systems (OMS) and skills based unmanned autonomy ecosystem.

The flight demonstrated the ability to rapidly plug and play both U.S. Navy and U.S. Air Force (USAF) autonomous unmanned technologies together. It further leveraged autonomy from three separate sources: government-provided human-machine interface (HMI) hardware, GA-ASI’s autonomy core, and orchestration of these components using Waveform X.

Autonomy skills were used to meet multiple objectives for collaborative combat missions and close the Find, Fix, Track, Target, Engage, and Assess (F2T2EA) engagement chain using a mix of Live, Virtual, and Constructive (LVC) entities. The flight, which took place at GA-ASI’s Desert Horizon Flight Operations Facility in El Mirage, Calif., illustrates the company’s commitment to maturing future Autonomous Collaborative Platform (ACP) technologies using the MQ-20 as a flying test bed.

“This flight underscores GA-ASI’s commitment to proving combat operational readiness for defense contractor products such as L3Harris’ Pantera and BANSHEE 2 radios, as well as open, vendor-agnostic autonomy architecture for UCAV platforms,” said GA-ASI Vice President of Advanced Programs Michael Atwood. “This most recent test shows multi-service compatibility of the autonomy core through the integration of USAF and Navy software skills, bringing us one step closer to government-owned, skills based interservice ecosystem for ACPs.”

Another important goal of GA-ASI’s flights is to demonstrate the company’s commitment to developing an open government standards-based autonomy ecosystem that enables rapid integration and validation of third-party tactical software applications. GA-ASI is focused on supporting the emerging government-managed App Store-based model that allows organizations to rapidly develop and deploy software while maintaining safety of flight and ensuring warfighters have up-to-date access to the industry’s best capabilities.

**57 . Date: 26-01-2024Armed ISR / ISTAR - MALE - General - PlatformGA-ASI's Gray Eagle 25M Makes Its 1st FlightURL: https://www.asdnews.com/news/defense/2024/01/26/gaasis-gray-eagle-25m-makes-its-1st-flight**

General Atomics Aeronautical Systems, Inc. (GA-ASI) conducted the first flight of the Gray Eagle 25M (GE-25M) Unmanned Aircraft System at its El Mirage, Calif. flight facility on Dec. 5, 2023. The first flight marks a significant milestone in the Gray Eagle modernization program as the U.S. Army continues to develop the Multi-Domain Operations (MDO)-capable GE-25Ms for U.S. Army active duty and National Guard units. The flight follows the award of an undefinitized contract on Dec. 1, 2023, not to exceed $389 million for the Gray Eagle 25M Production Representative Test Aircraft. The GE-25M is expected to be in service for the Army into the 2050’s.

The first flight of Gray Eagle 25M focused on flight critical operations, including the testing of the improved flight computer boasting 5X more processing capacity and 80X more data storage (with 10X more RAM) for increased computing power that enables processing at the edge, as well as meeting the demand for increased automation and autonomy. The flight tested the aircraft’s new HFE 2.0 engine and power generation systems. Designed in cooperation with Project Manager Endurance Uncrewed Aircraft Systems (PM EUAS), the new engine, gearbox, and generator design decreases major maintenance actions and virtually eliminates the need for overhaul.

“In an MDO environment, Soldiers need the aircraft to operate with increased reliability along with reduced manning and equipment, which is why GE-25M significantly reduces the maintenance required on the aircraft,” said GA-ASI President David R. Alexander.

GE-25M’s more powerful generators combined with advanced avionics enable the aircraft to function as a Multi-Domain Operations ‘truck’ with the ability to utilize a variety of advanced multi-intelligence sensors, launched effects, and electronic warfare pods.

GA-ASI is teamed with PM EUAS to deliver a government-owned, government-controlled open architecture that will enable plug and play capabilities, ensuring the platform can adapt to changing threats in the future. GE-25M incorporates open architecture aircraft and ground systems, advanced datalinks, and an upgraded propulsion system, significantly enhancing the ability to add new capabilities, provide resilience to electronic threats, and deliver expeditionary employment to austere locations.

**58 . Date: 12-02-2024Tanker - HALE - General - SoftwareEnhancing US Navy's MQ-25A UAS With Next-generation Vehicle Management System ComputerURL: https://www.asdnews.com/news/defense/2024/02/12/enhancing-us-navys-mq25a-uas-with-nextgeneration-vehicle-management-system-computer**

* **Increased computing power delivers advanced performance for unmanned aerial refueler**

BAE Systems has been selected by Boeing to upgrade and modernize the vehicle management system computer (VMSC) for the U.S. Navy’s MQ-25 unmanned aerial refueling system. The technology refresh will increase computing power and address obsolescence issues, providing the unmanned aerial tanker with an integrated solution that improves aircraft performance and allows for future capability growth.

BAE Systems’ next-generation VMSC controls all flight surfaces and performs overall vehicle management duties for the autonomous MQ-25. The MQ-25 is the Navy's first operational carrier-based unmanned aircraft and is designed to provide a much-needed aerial refueling capability. It also aims to relieve the refueling mission workload for F/A-18 aircraft, allowing them to take on other key mission roles, increasing the fleet’s capacity.

“BAE Systems is a leader in flight-critical systems and solutions,” said Corin Beck, senior director of Military Aircraft Systems for Controls and Avionics Solutions at BAE Systems. “Our upgraded VMSC for the MQ-25 will deliver advanced functionality—enabling this platform to execute today and tomorrow’s critical missions, while also reducing the amount of hardware required on the aircraft through consolidation into this computer.”

The cost-effective VMSC upgrade will use quad-core processors to increase computing power while optimizing size, weight, and power footprint on the aircraft. The multi-core processor selected for the MQ-25 VMSC has recently completed qualification on another U.S. military platform thereby reducing cost, schedule, and integration risk for this program.

This highly efficient and integrated system will deliver more capability by replacing multiple other onboard computers, improving aircraft reliability and reducing total lifecycle cost of ownership for the Navy. The new VMSC also provides growth capability to support future missions of the MQ-25, such as intelligence, surveillance and reconnaissance (ISR) technologies, and lays the foundation for all future carrier-based unmanned systems by pioneering the cutting-edge manned-unmanned teaming (MUM-T) operational concept.

BAE Systems also provides the Identification Friend or Foe (IFF) System for the aircraft.

The company has more than 40 years of experience developing and integrating flight control technology for military and commercial platforms. Work on the VMSC occurs at BAE Systems’ state-of-the-art engineering and manufacturing facility in Endicott, New York.

**60 . Date: 01-03-2024Armed ISR / ISTAR - HALE - General - PlatformGA-ASI Makes 1st Flight of XQ-67A OBSSURL: https://www.asdnews.com/news/defense/2024/03/01/gaasi-makes-1st-flight-xq67a-obss**

General Atomics Aeronautical Systems, Inc. (GA-ASI) flew the XQ-67A Off-Board Sensing Station (OBSS) for the first time on Feb. 28, 2024. OBSS is an Air Force Research Laboratory (AFRL) program and GA-ASI was selected in 2021 to design, build and fly the new aircraft.

With flight of the AFRL-funded XQ-67A, GA-ASI has validated the “genus/species” concept first developed with AFRL as part of the Low-Cost Attritable Aircraft Platform Sharing (LCAAPS) program focused on building several aircraft variants from a common core chassis.

Under LCAAPS, AFRL and GA-ASI explored development of a chassis, termed a “genus”, as the foundational core architecture from which several “species” of aircraft can be built.

“This provides an alternative acquisition approach for military aircraft that enables faster development, lower costs and more opportunities for frequent technology refresh,” said Trenton White, OBSS Program Manager and aerospace engineer in AFRL’s Aerospace Systems Directorate. “XQ-67A is the first "species" to be designed and built from this shared platform. Flight demonstration of this system is a major first step toward showing the ability to produce affordable combat mass.”

“OBSS is the first aircraft type built and flown using a common core chassis developed by GA-ASI that promotes commonality across multiple vehicle types,” said GA-ASI Vice President of Advanced Programs Michael Atwood.

**61 . Date: 13-03-2024Target Drone - Tactical - General - SoftwareShield AI Selected by NAVAIR PMA-281 to Integrate Hivemind AI Pilot Onto 8th Aircraft: the Kratos BQM-177AURL: https://www.asdnews.com/news/defense/2024/03/13/shield-ai-selected-navair-pma281-integrate-hivemind-ai-pilot-onto-8th-aircraft-kratos-bqm177a**

Shield AI, the defense technology company building the world’s best AI pilot, today announced it has been selected by NAVAIR PMA-281 to integrate its AI Pilot onto the Kratos BQM-177A to enable advanced AI-based autonomy.

Shield AI will work closely with the original equipment manufacturer (OEM), Kratos, to contribute to the U.S. Navy’s objective of increasing capabilities to provide fleet protection by utilizing AI-powered crewed-uncrewed teaming (CU-T) capabilities.

“This will be the eighth different type of aircraft integration we’ve done; it will be the fourth jet aircraft. We are getting faster and faster at integrating our AI pilot onto other aircraft because we deliberately architected our AI pilot product and associated software infrastructure as an open, modular platform play that can be systematically reused across DoD hardware. The last integration we did was about 165 days from contract award to first AI-piloted flights, and so we’re hoping to top that. I’m also excited to see what our AI pilot will do with the Kratos BQM-177 — an amazing aircraft capable of flying .95 Mach and as low as 6.6 feet above the ocean. Kratos has been a terrific partner in rolling out our AI pilot onto jet aircraft,” said Brandon Tseng, Shield AI’s President/Cofounder, a mechanical engineer, and a former U.S. Navy SEAL.

Shield AI’s innovative technical approach for the Navy contract employs an AI architecture that starts with foundational autonomy behaviors. These core behaviors, essential for both administrative and tactical operations, are enhanced to support advanced, collaborative tactics among multi-agent systems. Utilizing Expert Systems and Reinforcement Learning, this method enables precise, autonomous coordination of multiple sensor-equipped or shooter-equipped uncrewed aircraft, marking a significant advancement in collaborative tactical behaviors for defensive counterair (DCA) operations.

Shield AI’s flagship product, Hivemind, is an AI pilot that enables teams of intelligent aircraft to operate and complete missions autonomously in high-threat environments, without the need for remote operators or GPS. Hivemind is an aircraft-agnostic autonomy stack similar to the self-driving technology found in cars. It has flown on six different aircraft and deployed on hundreds of aircraft. The different aircraft include three quadcopters, the MQ-35A V-BAT, the F-16, and Kratos MQM-178 Firejet. Later this year, it will fly Kratos’ XQ-58 Valkyrie. Shield AI’s work as part of the DARPA ACE Team, where its AI Pilot won the DARPA AlphaDogFight and later flew F-16 completely autonomously, has been named a finalist for the Collier Trophy – an annual award given to the “greatest achievement in aviation and astronautics.”

**62 . Date: 18-03-2024Target Drone - Tactical - Contract - Kratos Receives $57.6M Contract for 70 BQM-177A Aerial TargetsURL: https://www.asdnews.com/news/defense/2024/03/18/kratos-receives-576m-contract-70-bqm177a-aerial-targets**

Kratos Defense & Security Solutions, Inc. (NASDAQ: KTOS), a Technology Company in the Defense, National Security and Global Markets and industry-leading provider of high-performance, jet-powered unmanned aerial systems, announced today that its Unmanned Systems Division has received a $57,673,542 modification to a previously awarded firm-fixed-price contract. This modification exercises options to procure full rate production Lot Five of the BQM-177A Surface Launched Aerial Targets to provide for the production and delivery of 70 BQM-177A Surface Launched Aerial Targets and 70 Rocket-Assisted Takeoff attachment kits, as well as associated technical and administrative data in support of weapons system test, and evaluation and fleet training for the Navy.

Steve Fendley, President of Kratos Unmanned Systems Division, said, “It’s exciting to be a major part of this critically important capability for the U.S. Navy with our BQM-177A Sub-Sonic Aerial Target (SSAT) aircraft system (target). The 177A continues to push the envelope delivering leading edge realistic threat-representative capabilities to support today’s peer-level threat environment. We look forward to the increased production rate and continuing to evolve the system with our customer as the threats evolve.”

Greg Crewse, Program Manager for the Navy’s Aerial Targets program office (PMA-208), said, “In partnership with the Navy Aerial Targets program office, Kratos Defense and the BQM-177A Air Vehicle are true assets to the Navy and, together, we have the opportunity to engage in critical training exercises that will prepare our personnel to face a multitude of scenarios in a challenging, cost-effective test environment prior to engaging real-world threats, should the need arise. As recent real-world events have proven, these target presentations are growing ever more critical to prepare our warfighters to go into harm’s way – and prevail.”

**63 . Date: 21-03-2024Armed ISR / ISTAR - MALE - General - ArmamentGA-ASI Tests Sonobuoy Dispensing System with MQ-9B SeaGuardianURL: https://www.asdnews.com/news/defense/2024/03/21/gaasi-tests-sonobuoy-dispensing-system-with-mq9b-seaguardian**

On Feb. 27, 2024, General Atomics Aeronautical Systems, Inc. (GA-ASI), in cooperation with the Naval Air Systems Command (NAVAIR), conducted a series of tests on GA-ASI’s Sonobuoy Dispensing System (SDS) using the MQ-9B SeaGuardian® Unmanned Aircraft System (UAS) on the U.S. Navy’s W-291 test range in southern California.

GA-ASI’s SeaGuardian flew the full test flight event configured with the SDS pod and SeaVue multi-role radar from Raytheon, an RTX business. During the test, the SDS pod dropped eight AN/SSQ-53 and two AN/SSQ-62 sonobuoys. Upon dispensing, the sonobuoys were successfully monitored by the SeaGuardian’s onboard Sonobuoy Monitoring and Control System (SMCS).

“This was a very successful demonstration of our SDS capability,” said GA-ASI President David R. Alexander. “The demonstration helped us prove out the SDS, which is an important component for our Anti-Submarine Warfare capability.”

The SeaGuardian was flown under a NAVAIR Interim Flight Clearance. The SDS pod is fitted with an advanced pneumatic ejection system developed, designed, and manufactured by AEREA in Italy. AEREA also supplies the internal structure assembly.

MQ-9B SeaGuardian is a medium-altitude, long-endurance RPA system. Its multi-domain capabilities allow it to flex from mission to mission. SeaGuardian has been used by the U.S. in several recent demonstrations, including Northern Edge, Integrated Battle Problem and Group Sail. The aircraft is currently being operated by the Japan Coast Guard (JCG) and the Japan Maritime Self-Defense Force (JMSDF).

**64 . Date: 22-03-2024Armed ISR / ISTAR - MALE - Training - SimulationGA-ASI Adds New Capabilities to its Predator Mission TrainerURL: https://www.asdnews.com/news/defense/2024/03/22/gaasi-adds-new-capabilities-its-predator-mission-trainer**

In a move that will be welcomed by many of its international customers, General Atomics Aeronautical Systems, Inc. (GA-ASI) has installed enhanced operating software into its Predator Mission Trainer (PMT) simulator that resides at GA-ASI’s Flight Test & Training Center (FTTC) in Grand Forks, North Dakota. The new PMT Plus software was developed jointly by GA-ASI and CAE-USA allowing international flight crews to train on the latest version of Operational Flight Program (OFP) software and as well as the latest capabilities including Automatic Takeoff and Landing Capability (ATLC).

“With this upgrade, our international customers can now train on the latest version of OFP for their fleets of MQ-9A Remotely Piloted Aircraft,” said GA-ASI President David R. Alexander. “For our MQ-9A customers, the PMT Plus will be an exciting enhancement for them, enabling cutting-edge mission training. In addition, the new software will enable us to efficiently upgrade to future OFPs to meet our customers’ operational needs.”

In addition to its OFP and ATLC capabilities, PMT Plus improves the visual graphics for conducting operationally realistic Intelligence, Surveillance, and Reconnaissance (ISR) mission training, including the addition of maritime entities. The improved user interface at the Instructor Off-board Station (IOS) allows instructors to add elements into scenarios more rapidly, either during a lesson or immediately before a lesson, which saves time and enables a more student-centric learning experience.

“Collaboration is critical to delivering efficient mission training at the point of need,” said CAE Defense & Security Group President Dan Gelston. “Our longstanding relationship with GA-ASI enables agile development and rapid integration so customers not only gain enhanced training capabilities but also benefit from efficiencies like a smaller hardware suite, which adds additional value.”

The enhanced software also reduces the PMT’s footprint, enabling a reduction in electrical and Heating, Ventilation, and Air Conditioning (HVAC) demand, while producing a quieter learning environment for students and instructors.

The PMT was purchased from CAE and has been a core component of GA-ASI’s customer training at the FTTC since 2020. The FTTC has been the centerpiece of GA-ASI’s customer training capability since its founding. In 2023, GA-ASI announced the opening of a new hangar at the FTTC specifically to support international crew training.

**65 . Date: 03-04-2024Partnership - IAI and Aerotor Unmanned Systems Have Signed an MoUURL: https://www.asdnews.com/news/defense/2024/04/03/iai-aerotor-unmanned-systems-have-signed-mou**

Israel Aerospace Industries (IAI), and Aerotor Unmanned Systems have signed a Memorandum of Understanding (MOU) that includes the development of products and promotion of their commercial cooperation.

Within the framework of the MOU,  advanced drone systems for a variety of tactical military missions for users on land, at sea and in the air will be developed. The agreement includes the engineering development and marketing of Aerotor’s Apus multicopter, which is based on a unique configuration which uses a central heavy-fuel propulsion system piloted through a variable-pitch mechanism. This provides a distinct operational advantage in terms of the payload that can be carried, flight duration, and maneuverability.

CEO of Israel Aerospace Industries, Boaz Levy: “Cooperation between IAI and Aerotor will allow us to leverage synergies in our product lines and promote the business growth of both companies. Both in normal times and during times of emergency, IAI continues to provide its customers with the best solutions. Collaboration agreements like the one we have just signed bring us to the forefront in all the fields in which we are active, thus increasing our portfolio of solutions.”

Chairperson and CEO of Aerotor Unmanned Systems, Raz Geva: “Aerotor develops pathbreaking platforms in terms of their flight duration and the payload they can carry. Together with IAI as a leading partner in the aviation sector and in unmanned platforms in both the military and paramilitary fields, we will expand our customer base around the world. Aerotor and IAI have already begun to cooperate, and together, the two companies will create new business opportunities, for the benefit of both our companies.”

**66 . Date: 24-04-2024General - SoftwareAV Unveils New AI Capability and Autonomy Kit for Unmanned SystemsURL: https://www.asdnews.com/news/defense/2024/04/24/av-unveils-new-ai-capability-autonomy-kit-unmanned-systems**

AeroVironment (AV) has introduced its Autonomy Retrofit Kit (ARK) and AVACORE software demonstrating the company’s commitment to advancing autonomy and machine learning capabilities to increase effectiveness of autonomous systems and reduce operator burdens. ARK and AVACORE bring AV’s accelerated autonomy to fielded assets such as Puma™ 3 AE and Puma™ LE, in addition to future autonomous systems.

ARK is a quick-connect payload introducing a new suite of intelligent mission capabilities for Group 1+ unmanned aircraft systems (UAS). Providing edge computing for mission-critical applications, ARK enables operators to task a single or multi-vehicle team with mission objectives for fully autonomous execution while operating in communications-contested environments. ARK also intelligently integrates with distributed groups of dismounted units in a Mobile Ad Hoc Network (MANET) using the Android Team Awareness Kit (ATAK).

AVACORE is AV’s autonomy software providing an open framework for unmanned systems. It features a modular set of interfaces such as autopilots, radios and sensors, and supports rapid integration with new platforms and applications. ARK also comes preinstalled with SPOTR-Edge, AV’s computer vision software, for onboard detection, classification, localization, and tracking of operationally relevant objects including people, vehicles, aircraft, and maritime vessels, day or night.

“ARK and AVACORE provide enhanced capabilities and critical advantages to warfighters on complex battlefields,” said AV’s Senior Vice President of MacCready Works, Jeff Rodrian. “This payload combines AV’s unparalleled autonomy and field-proven computer vision SPOTR-Edge to accelerate awareness and mission success.”

Through the combination of autonomy and computer vision, ARK and AVACORE allow operators to select a wide variety of single or multi-agent capabilities including multi-region search, track and follow and more. The introduction of these systems builds upon AV’s proven and trusted family of autonomous systems, bringing a scalable, adaptable AI toolset to fielded and new assets for safer, smarter mission capabilities.

“AVACORE features an intuitive behavior tree approach allowing flexibility for rapid development and adoption of new autonomous missions,” continued Rodrian. “This results in smarter systems with reduced cognitive load for warfighters.”

**67 . Date: 24-04-2024Armed ISR / ISTAR - MALE - General - ArmamentGA-ASI Mojave Lights Up the Yuma Desert in Live-Fire DemoURL: https://www.asdnews.com/news/defense/2024/04/24/gaasi-mojave-lights-up-yuma-desert-livefire-demo**

* **Minigun Integration Showcases the Firepower and Versatility of STOL UAS; Highlights Ability to Rapidly Integrate New Multi-Mission Capabilities**

General Atomics Aeronautical Systems, Inc. (GA-ASI) confirms that its Mojave Unmanned Aircraft System (UAS) destroyed static targets in live-fire tests on April 13, 2024, validating the system’s battlefield relevance and recording another milestone for the demonstrator aircraft.

GA-ASI partnered with Dillon Aero to mount two of Dillon’s DAP-6 Gun Pod Systems onto the Mojave aircraft. Mojave performed seven passes across two flights during the demonstration, expending around 10,000 rounds of ammunition as the UAS shredded a variety of targets.

“Seeing our Mojave perform this live-fire demo really emphasizes the versatility of the Mojave UAS and what it can do,” said GA-ASI President David R. Alexander. “Mojave has the ability to act as a sensor, shooter, and sustainer while mitigating threat environments and vulnerabilities and safeguarding human lives.”

Mojave and its short takeoff and landing (STOL) capability has built significant interest in the military and aerospace communities. Mojave is unique: a UAS with significant payload capacity that can perform in areas once considered unsuitable for UAS operations. Its ability to take off and land from unimproved landing sites at short distances as well as operate from aircraft carriers – as it did in November 2023 as part of a demonstration with the United Kingdom’s Royal Navy – is capturing imaginations and changing expectations about how large unmanned systems can be used.

The live-fire demonstration took place at Yuma Proving Ground, Arizona, and was funded via GA-ASI’s internal research and development budget.

The Mojave technical demonstrator shares common systems and components with GA-ASI’s modernized Gray Eagle 25M, effectively providing an expeditionary Gray Eagle STOL capability. In addition to a wing kit option for Gray Eagle, GA-ASI is planning one for the larger MQ-9B aircraft, which includes SkyGuardian® and SeaGuardian® models.

The actual Mojave STOL UAS with multi-mission payloads will be on display in GA-ASI’s booth (#792) at the Army Aviation Mission Solutions Summit in Denver, Colorado, April 24-26, 2024.

**68 . Date: 25-04-2024Armed ISR / ISTAR - HALE - Contract - Anduril Selected for USAF Collaborative Combat Aircraft ProgramURL: https://www.asdnews.com/news/defense/2024/04/25/anduril-selected-usaf-collaborative-combat-aircraft-program**

Today, the United States Air Force announced that Anduril has been selected as one of two vendors to move forward on the Collaborative Combat Aircraft (CCA) program. Over the next phase, Anduril will design, manufacture, and test production-representative CCAs.

“There is no time to waste on business as usual. With the CCA program, Secretary Kendall and the Air Force have embraced a fast-moving, forward-looking approach to field autonomous systems at speed and scale,” said Brian Schimpf, CEO and Co-Founder. “We are honored to be selected for this unprecedented opportunity, which signals a demand for continued expansion of the defense industrial base. Anduril is proud to pave the way for other non-traditional defense companies to compete and deliver on large scale programs.”

“Anduril’s work on this program is just beginning,” said Jason Levin, Senior Vice President of Anduril’s Air Dominance & Strike Division. “U.S. and allied success in the future requires CCAs to be delivered at a speed, cost, and scale to beat the pacing threat. We look forward to continuing our partnership with the U.S. Air Force to deliver this critical capability to our Airmen as quickly as possible.”

Autonomy and affordable mass have been central tenets of Anduril’s approach since the company’s founding in 2017. Anduril is committed to transforming US and allied defense capabilities by combining modern software expertise with a rapid and differentiated approach to hardware development and manufacturing. From cutting-edge counter drone systems to extra-large autonomous underwater vehicles, Anduril has proven it can deliver highly-performant, next-generation, software-defined capabilities on a timeline and scale that matters.

**69 . Date: 25-04-2024Armed ISR / ISTAR - HALE - Contract - GA-ASI Selected to Build CCA for AFLCMCURL: https://www.asdnews.com/news/defense/2024/04/25/gaasi-selected-build-cca-aflcmc**

General Atomics Aeronautical Systems, Inc. (GA-ASI) has been selected to build production representative flight test articles of the Collaborative Combat Aircraft (CCA) for the U.S. Air Force Life Cycle Management Center’s (AFLCMC) Advanced Aircraft Division. This option contract award by the Advanced Aircraft Division exercises the critical design, build, and flight test on the existing CCA contract with GA-ASI following an initial 6-month phase that culminated in a successful CCA preliminary design review (PDR) earlier this year.

The CCA program aims to be a force multiplier, developing a low-cost, modular, unmanned aircraft equipped with advanced sensors or weapons and operating in collaborative teams with the next generation of manned combat aircraft.

In February 2024, GA-ASI successfully conducted the maiden flight of the XQ-67A CCA prototype aircraft validating the “genus/species” concept pioneered by the Air Force Research Laboratory (AFRL) as part of the Low-Cost Attritable Aircraft Platform Sharing (LCAAPS) program. This program focused on building several aircraft variants from a common core chassis. Since then, this prototype for CCA has successfully completed two additional test flights, laying the groundwork for a successful production and flight test program. GA-ASI’s CCA production representative design is based upon the XQ-67A Off-Board Sensing Station developed by GA-ASI for the AFRL.

“The CCA program redefines the future of aviation and will shape the USAF acquisition model to deliver affordable combat mass to the warfighter at the speed of relevancy,” said Mike Atwood, Vice President of Advanced Programs for GA-ASI.

“Throughout our 30-year history, GA-ASI has been at the forefront of rapidly advancing unmanned aircraft systems that support our warfighters,” said GA-ASI President David R. Alexander. “The USAF is moving forward with GA-ASI due to our focused commitment to unmanned air-to-air combat operations and unmatched UAS experience, ensuring the production of the CCA aircraft at scale to deliver affordable combat mass for the warfighter.”

To complement the CCA contract, GA-ASI will continue to conduct a series of autonomy and mission system tests on the MQ-20 Avenger® UAS and XQ-67A to accelerate the readiness of operational autonomy. These live flight tests will continue to demonstrate the readiness of the full mission capability to support the emerging U.S. Air Force Autonomous Collaborative Platforms (ACP).

**70 . Date: 30-04-2024Cargo - MALE - General - PlatformKaman Celebrates Successful 1st Flight of Autonomous KARGO UAVURL: https://www.asdnews.com/news/defense/2024/04/30/kaman-celebrates-successful-1st-flight-autonomous-kargo-uav**

Kaman Corporation proudly announces the significant achievement of the first flight of the full-scale KARGO UAV, a purpose-built, autonomous, expeditionary resupply vehicle. This milestone, which took place in December of 2023, signifies a major accomplishment in the ongoing flight test progression. The development of this medium-lift UAS, initiated in 2021 to address logistics needs for U. S. Marine Corps operations, is now well underway.

“It is difficult to describe the sense of satisfaction one feels when watching an aircraft take flight for the first time, and very few people get the opportunity to participate in something like this,” said Romin Dasmalchi, General Manager of KARGO UAV. “This team worked hard to get here, and the intensity continues as we look to move from prototyping to production,” he added. KARGO UAV is intended to support the U. S. Military, partners, allies, and commercial customers by providing affordable, reliable, and maintainable logistics support in austere and maritime environments. The design leverages existing high-TRL components so that a suitable system could be deployed as soon as 2026.

Contributions from partners significantly aided the success of the KARGO UAV flight test. Near Earth Autonomy, Kaman’s partner for the autonomy system based in Pittsburgh, PA, provided autonomy features on the KARGO UAV. The two companies had previously collaborated on the K-MAX unmanned system and had showcased an earlier version of the autonomy technology to the Marines in April 2021. The Alaska Center for UAS Integration, part of the University of Alaska Fairbanks Geophysical Institute, was key in facilitating KARGO UAV flight test operations.

KARGO UAV is currently competing under the Marines’ Medium Autonomous Resupply Vehicle—Expeditionary Logistics (MARV-EL) program, which is managed by NAVAIR PMA-263 and culminates in a fly-off in July of this year.

**71 . Date: 01-05-2024Tanker - HALE - General - SoftwareBoeing Validates Software for Future Manned Unmanned Refueling MissionsURL: https://www.asdnews.com/news/defense/2024/05/01/boeing-validates-software-future-manned-unmanned-refueling-missions**

* **Software advancing after years of development and testing; now encompassing real aircraft hardware**
* **Results significantly reduce communication time between F/A-18 pilots and unmanned MQ-25 Stingrays**

Boeing [NYSE: BA] has advanced its manned-unmanned teaming (MUM-T) technology using a digital F/A-18 Super Hornet and MQ-25 Stingray. The testing shows the software is maturing for future U.S. Navy use and a potential to deploy the teaming capability on both F/A-18 Block II and III Super Hornets.

In a simulator lab, a Boeing-led team virtually demonstrated an F/A-18 pilot commanding an unmanned MQ-25 to release a refueling drogue and refuel the Super Hornet, using existing communications links on both platforms.

The new software is a maturation of tests Boeing has previously done. In addition to the upgraded software, test teams pulled in hardware and datalinks already installed on both platforms to run the finalized software further proving Boeing’s readiness to deliver this capability to the Navy.

“MQ-25 is designed to typically receive commands from air vehicle pilots on an aircraft carrier. This software will add a second option, enabling pilots to initiate commands right from their cockpit,” said Alex Ewing, F/A-18 New Product Development lead.

The Boeing-created software will significantly reduce the time it takes for an F/A-18 to communicate with an MQ-25, giving pilots greater flexibility in refueling from longer distances.

“The goal of the demonstrations was to make MUM-T refueling as real as possible,” said Juan Cajigas, director, Advanced MQ-25 program. “Aerial refueling is like a ballet as two airplanes come together. To be able to direct the activities via a single pilot, safely and efficiently, is a major step forward in aerial refueling technology.”

**72 . Date: 08-05-2024Loitering Munition - Mini - Contract - AV's Switchblade 600 Selected for Tranche 1 of the US DoD's Replicator InitiativeURL: https://www.asdnews.com/news/defense/2024/05/08/avs-switchblade-600-selected-tranche-1-us-dods-replicator-initiative**

AeroVironment’s (AV) Switchblade 600 loitering munition system has been selected for Tranche 1 of the first iteration of the U.S. Department of Defense’s (DoD) Replicator initiative. AV’s Switchblade 600 is a man-portable, extended-range loitering munition system equipped with an anti-armor warhead for engaging larger, hardened targets at greater distances. The first iteration of the Replicator initiative aims to accelerate all-domain, attritable autonomous systems to warfighters at speed and scale.

The first iteration of the Replicator initiative will field thousands of autonomous systems across multiple domains within the next 18-24 months, as part of the Pentagon's strategy to counter peer adversaries’ rapid military buildup. The initiative will prioritize the fielding of attritable capabilities — affordable uncrewed platforms that allow commanders to tolerate a higher degree of risk in employing these “force multiplying” systems.  
“Switchblade 600 is a battle-proven system in full-rate production that can support the DoD’s desire to field thousands of autonomous systems across multiple warfighting domains,” said AV’s SVP of Loitering Munition Systems, Brett Hush.

Equipped with advanced sensors and precision flight control, Switchblade 600 is capable of quick and easy deployment via tube launch and can fly, track and engage non-line of sight targets. Switchblade 600’s patented wave-off and recommit capability allows operators to abort the mission and re-engage as the mission requires.

“Our uncrewed systems, autonomy technology and computer vision software can help achieve multidomain operations in a heavily contested battlespace, at very low costs and high levels of resiliency,” continued Hush. “We have not only invested in the maturation of such disruptive technologies but also the production capability and capacity to produce large volumes at the level of reliability that the U.S. DoD expects.”

**73 . Date: 10-05-2024Armed ISR / ISTAR - MALE - General - PlatformGA-ASI and Shift5 Partner to Embed Observability Into MQ-9A ReaperURL: https://www.asdnews.com/news/defense/2024/05/10/gaasi-shift5-partner-embed-observability-into-mq9a-reaper**

* **Modernization of Reaper through Onboard Data Access and Analysis Increases Cybersecurity, Readiness, and Survivability**

Today, General Atomics Aeronautical Systems, Inc. (GA-ASI) announced its partnership with Shift5 to integrate the company’s onboard cyber anomaly detection and predictive maintenance capabilities into the MQ-9A Reaper for the United States Special Operations Command (USSOCOM) and Air Force Special Operations Command (AFSOC). The GA-ASI and Shift5 partnership will assure AFSOC and SOCOM mission readiness and cyber survivability.

“GA-ASI has long maintained a focused commitment to unmanned combat operations and unmatched unmanned aircraft system (UAS) experience, exemplified through our MQ-9A Reaper,” said GA-ASI President David R. Alexander. “The next logical and immediate extension of our work in enabling the U.S. Air Force is empowering AFSOC and SOCOM with additional resiliency and survivability of the MQ-9A on the battlefield. Shift5 represents a new class of dual-use defense tech business that can successfully operate at speed and scale with us to make an immediate impact for the warfighter.”

The Shift5 Platform reveals critical operational and cybersecurity insights that enable operators to move from data to decisions quickly and confidently. The Shift5 Platform deploys on premises or in the cloud and supports streaming and air-gapped modes for offline and online capability.

“The battlefield of the future will include more remotely piloted, autonomous, and unmanned systems. Central to maintaining advantage in this operating environment is access to real-time data,” said Josh Lospinoso, CEO and co-founder of Shift5. “Our work with GA-ASI represents one of the most efficient and effective ways that AFSOC and SOCOM can gain access to critical operational and cybersecurity insights, democratize that data, and maintain decision dominance.”

Shift5 achieved its first cross-platform Authority to Operate (ATO) Certification from the U.S. Department of Defense (DoD) in April 2023, validating the resilience and security of the Shift5 Platform. Most recently, the company announced its contract with the U.S. Army to secure the High Mobility Artillery Rocket System (HIMARS) against cyber threats and provide readiness assessments to enable predictive maintenance. It also introduced the GPS Integrity Module, the first known cross-platform solution to automate detection and alerts to combat GPS spoofing risks.

**74 . Date: 10-05-2024ISR / ISTAR - Small - Contract - Textron Systems Selected By US Army For FTUAS Program Option 3 And 4URL: https://www.asdnews.com/news/defense/2024/05/10/textron-systems-selected-us-army-ftuas-program-option-3-4**

* **Builds on Advanced Capabilities of Aerosonde Mk. 4.8 HQ System**

Textron Systems Corporation, a Textron Inc. (NYSE:TXT) company, announced today it was selected by the U.S. Army for the Future Tactical Uncrewed Aircraft System (FTUAS) Option 3 and Option 4 award. During Option 3 and Option 4, Textron Systems will complete a flight demonstration, MOSA demonstration, and ultimately deliver an Aerosonde® Mk. 4.8 Hybrid Quad (HQ) uncrewed aircraft system (UAS) to the U.S. Army for test and evaluation.

Configured with an expeditionary footprint, the Aerosonde Mk. 4.8 HQ is designed to reduce burden on the soldier, while offering best-in-class size, weight and power (SWAP) to execute day and night missions with multi-INT payloads.

“The FTUAS capability will be transformative for the Brigade Combat Teams (BCTs),” said Wayne Prender, Senior Vice President of Air Systems. “Textron Systems has decades of experience in UAS manufacturing and systems integration, which puts us in a position to produce at any pace the customer wants. We know how to provide full life cycle support, from production to training, spares, repairs, logistics and continuous technology modernization – all of which are critical to supporting our soldiers.”

The Aerosonde HQ has a multi-payload capability which allows for greater flexibility in utilizing sensors for mission success based on the environment. The Aerosonde family of systems have amassed over 650,000 flight hours.

**75 . Date: 16-05-2024Armed ISR / ISTAR - HALE - General - The Heron TP RPAS Has Made Its Maiden Flight Over GermanyURL: https://www.asdnews.com/news/defense/2024/05/16/heron-tp-rpas-has-made-its-maiden-flight-over-germany**

The German Heron TP (GHTP), produced by UAV PEO at the Directorate of Defense, Research and Development at the IMoD and Israel Aerospace Industries, has today (15.5.2024) flown in German airspace for the first time. The Remotely Piloted Aircraft System (RPAS) was customized for the unique requirements of the German Ministry of Defence, as part of a joint venture between IAI, Israel’s Ministry of Defense’s Directorate of Defense Research and Development (DDR&D), and Airbus.

The close cooperation between Airbus, IAI, DDR&D and the German Armed Forces, ensured development of a RPAS which exhibits both advanced performance and operational readiness while also providing the German Armed Forces with additional capabilities. The flight was conducted in the presence of the senior representatives from the German Air Force, the DDR&D at the Israeli Ministry of Defense, Airbus and, IAI. This historic event is an important step towards reaching full operational capability.

President and CEO of Israel Aerospace Industries (IAI), Mr. Boaz Levy:" The deployment of Heron TP (GHTP) RPAS in Germany signifies a milestone achievement for Israel Aerospace Industries, reinforcing its position as a leading provider of cutting-edge aerospace and defense solutions on the global stage. This collaboration sets the stage for continued innovation and collaboration in addressing the ever-evolving challenges in the defense sector."

Head of DDR&D, IMOD, Dr. Daniel Gold:" We are immensely proud to witness this milestone achievement, the maiden flight of the German Heron TP. This joint endeavor between Israel and Germany exemplifies the strong partnership and collaboration between our nations, harnessing cutting-edge technology to provide a qualitative military advantage. The German Heron TP RPAS represents a strategic leap forward in intelligence, surveillance, and reconnaissance capabilities, fortifying Germany's defense prowess while fostering interoperability with our allies.”

IAI VP and General Manager of the Military Aircraft Group, Mr. Moshe Levy: “IAI is pleased to note this further step forward in the German Heron TP project. We thank our partners at Airbus and the Ministry of Defense for their cooperation in this project. It is a source of considerable pride for us that the Heron UAV manufactured by IAI is now flying in German airspace. Together with our partners at Airbus, we are at the disposal of the German Ministry of Defence for whatever they may need and will provide our best possible service. We look forward to implementing a fully successful program.”

Head of UAV PEO, DDR&D, IMOD: “We are thrilled with this historic achievement as the Heron-TP RPAS completed its first flight on German airspace. This milestone, made possible through collaborative efforts between Israeli and German governments alongside the IAI and Airbus industries. The Heron-TP RPAS includes advanced capabilities by using cutting-edge technologies integrated into its design.”

Head of Air Power at Airbus Defence and Space, Mr. Jean-Brice Dumont: “With the German Heron TP, we are building on the success of our close cooperation with Israel Aerospace Industries and the German Armed Forces on the Heron 1. This RPAS has been vital for the safety of German troops and populations in Afghanistan and Mali, while also having supported humanitarian missions. The Heron TP will continue in this tradition and guarantee an unmanned system with outstanding performance and operational readiness, which could also provide additional capabilities for the German Armed Forces in the future due to its modularity, such as maritime surveillance capabilities.”

About the German Heron TP (GHTP) RPAS:  
The German Heron TP (GHTP) RPAS, a strategic platform capable of carrying a variety of sensors, is a unique joint Israeli and German project, based on a contract given to Airbus and IAI.

As part of an operational turnkey solution by Airbus, the German Heron TP (GHTP) RPAS will fill a gap in the field of persistent, airborne, intelligence surveillance and reconnaissance (ISR). In addition to the provision and modification of the RPAS, the industrial operator model also includes the training of Air Force personnel, basic operation, maintenance, and repair, in theatre, as well as the provision of flight hours.

The system is equipped with means to conduct optical and imaging radar reconnaissance, while providing options for additional SIGINT (signals intelligence) as well as maritime surveillance capabilities.

The German Heron TP (GHTP) RPAS, enables the German Armed Forces to expand its strategic and tactical capabilities, while ensuring interoperability with NATO partners.

At the same time, the system is the only RPAS in its class that has been certified in compliance with STANAG 4671.

The Heron TP is the strategic version in IAI’s Heron family of RPAS which also includes the Heron 1 – successfully operated by the German Air Force during its deployments in Afghanistan and Mali for a number of years.

**76 . Date: 20-05-2024Research - N/A - General - PlatformAurora's Latest X-Plane Design Speeds AheadURL: https://www.asdnews.com/news/defense/2024/05/20/auroras-latest-xplane-design-speeds-ahead**

* **An Aurora and Boeing team advances its high-speed, vertical lift concept to the preliminary design phase.**

Aurora Flight Sciences, a Boeing company, recently completed conceptual design review for a game-changing, high-speed, vertical lift X-plane and has been selected to continue development of a preliminary design review. The aircraft is being developed for a Defense Advanced Research Projects Agency (DARPA) program called Speed and Runway Independent Technologies (SPRINT), which “aims to design, build, and fly an X-plane to demonstrate the key technologies and integrated concepts that enable a transformational combination of aircraft speed and runway independence.”

Aurora’s concept is a low-drag, fan-in-wing demonstrator that integrates a blended wing body platform, combining the agility of vertical take-off and landing (VTOL) with unprecedented speed. The team’s approach seeks to set the program on the path to successful flight and demonstrate game-changing capability for air mobility and Special Operations Forces (SOF) missions.

New renderings of the fan-in-wing (FIW) demonstrator reveal three lift fans, a more refined, composite exterior; and an uncrewed cockpit. The choice of three lift fans reflects the team’s strategy to simplify the demonstrator and streamline its path to flight test. The FIW technology could be scaled to four or more lift fans to meet future aircraft requirements, and it could unlock opportunities for a future family of systems. Similarly, while an uncrewed demonstrator offers benefits in testing and risk reduction, the FIW technology would be fully transferrable to traditional aircraft with crews.

**77 . Date: 30-05-2024Armed ISR / ISTAR - MALE - General - PlatformBell Awarded Funding for Phase 1B of DARPA SPRINT X-Plane Program URL: https://www.asdnews.com/news/defense/2024/05/30/bell-awarded-funding-phase-1b-darpa-sprint-xplane-program**

Bell Textron Inc., a Textron Inc. (NYSE: TXT) company, has been down-selected for Phase 1B of Defense Advanced Research Projects Agency (DARPA) Speed and Runway Independent Technologies (SPRINT) X-Plane program. The SPRINT program intends to design, build, and fly an X-Plane, an experimental aircraft to demonstrate enabling technologies and integrated concepts necessary for a transformational combination of aircraft speed and runway independence for the next generation of air mobility platforms. In Phase 1A, Bell executed conceptual design review and will move into preliminary design efforts for the SPRINT X-plane.

“Bell is honored to be selected for the next phase of this revolutionary program and ready to execute preliminary design,” said Jason Hurst, executive vice president, Engineering, Bell. “We completed our initial risk reduction efforts with our sled test demonstration at Holloman Air Force Base, and we look forward to building on this success with our continued work with DARPA.”

Bell completed risk reduction testing at Holloman Air Force Base in late 2023, showcasing folding rotor, integrated propulsion, and flight control technologies. Bell is building on its investment in High-Speed Vertical Takeoff and Landing (HSVTOL) technology and past X-plane experience to inform the X-plane development for this program.

Bell’s HSVTOL technology blends the hover capability of a helicopter with the speed (400+ kts), range, and survivability of jet aircraft. Bell has developed high-speed vertical lift technology for more than 85 years, pioneering innovative VTOL configurations like the X-14, X-22, XV-3 and XV-15 for NASA, the U.S. Army and U.S. Air Force, and continues to build on its proven history of fast flight from the Bell X-1.

**78 . Date: 03-06-2024Armed ISR / ISTAR - MALE - Contract - GA-ASI on Contract to Build and Field First Gray Eagle 25M Unit for Army National GuardURL: https://www.asdnews.com/news/defense/2024/06/03/gaasi-contract-build-field-first-gray-eagle-25m-unit-army-national-guard**

General Atomics Aeronautical Systems, Inc. (GA-ASI) announces that the Army National Guard (ARNG) has ordered 12 Gray Eagle 25M (GE 25M) Unmanned Aircraft Systems (UAS) paid for as part of 2023 congressional funding. The funding comes after ARNG leaders, which make up 45 percent of the U.S. Army’s combat divisions, requested GE 25Ms to make ARNG Divisions mirror the active component in being Multi-Domain Operations (MDO) capable, deployable, and better able to team with newly formed Division Artillery Brigades (DIVARTY). They will also be available to support domestic missions, such as homeland defense and disaster response, as needed.

GE 25M is a modernized model of the Gray Eagle designed to meet the U.S. Army’s needs for MDO capability for both active duty and National Guard units. GE 25M is equipped with the new EagleEye multi-mode radar and electro-optical/infrared sensors, and can host a wide range of additional kinetic and non-kinetic payloads. Equipping ARNG Divisions with organic GE 25Ms makes possible the necessary mission planning, targeting, communications, detailed coordination, and realistic training needed to employ the systems successfully in combat. GE 25M will allow ARNG Divisions to have Divisional Reconnaissance, Surveillance, and Target Acquisition (RSTA) for the first time.

“The Gray Eagle platform has a proven record of performance with over a million hours of safe operations, including automatic takeoff and landing capability,” said GA-ASI Vice President of DoD Strategic Development Patrick Shortsleeve. “The aircraft excels as an enabler for Fires, Maneuver, Network, and Intelligence operations. It is also an integral part of the Army Aviation team, working closely with manned rotary-wing systems to achieve overmatch against pacing threats.”

GE 25M flew its maiden flight on Dec. 5, 2023, following the award of an undefinitized contract award announced on Dec. 1, 2023, for the Gray Eagle 25M Production Representative Test Aircraft.

**79 . Date: 25-06-2024Research - General - PlatformMeet DARPA's Newest X-plane: XRQ-73URL: https://www.asdnews.com/news/defense/2024/06/25/meet-darpas-newest-xplane-xrq73**

* **The SHEPARD program's hybrid-electric uncrewed aircraft system has its official X-plane designation**

The Series Hybrid Electric Propulsion AiRcraft Demonstration program, known as SHEPARD, has received its official X-plane designation: XRQ-73.

SHEPARD is an "X-prime" program, leveraging the series hybrid electric architecture and some of the component technologies from the earlier AFRL/IARPA Great Horned Owl (GHO) project.

"The idea behind a DARPA X-prime program is to take emerging technologies and burn down system-level integration risks to quickly mature a new missionized long endurance aircraft design that can be fielded quickly," said Steve Komadina, SHEPARD program manager. "The SHEPARD program is maturing a specific propulsion architecture and power class as an exemplar of potential benefits for the Department of Defense.”

The DARPA team includes members from the Air Force Research Laboratory (AFRL), the Office of Naval Research (ONR), and our warfighters.

The prime contractor for SHEPARD is Northrop Grumman Corporation’s Aeronautics Systems sector in Redondo Beach, CA. Scaled Composites, LLC is a major supplier, along with Cornerstone Research Group, Inc., Brayton Energy, LLC, PC Krause and Associates, and EaglePicher Technologies, LLC.

The XRQ-73 aircraft will be a Group 3 UAS weighing approximately 1,250 pounds. First flight of the XRQ-73 is expected by year-end 2024.

**80 . Date: 25-06-2024Regulation - Thales Obtains the 1st Design Verification Report for a Complete Drone System Ever Granted by EASAURL: https://www.asdnews.com/news/defense/2024/06/25/thales-obtains-1st-design-verification-report-complete-drone-system-ever-granted-easa**

* **Design Verification Report (DVR) is a new process set up by EASA1 to grant UAS design approvals for medium risk drone operations, today under the Specific Assurance Integrity Level (SAIL) III and IV.**
* **Thales is the first company to be granted a full DVR for Light UAS SAIL III with the ScaleFlyt avionic solution integrated on an Aeromapper AVEM 300 CERBERE UAV.**
* **This world premiere ideally positions Thales to perform long-range drone operations for surveillance, detection and alert and achieve its UAS100 drone certification.**

Thales received the first full DVR ever granted by EASA to operate light UAS in medium risk, SAIL III. This DVR process set in place in April 2021 by the Agency aims at ensuring safe drone operations. Such a premiere strengthens the Group’s position on emerging civil drone market and represents further progress towards the certification of the Thales UAS100 in the most demanding conditions.

Flying drones represents a tremendous opportunity to convey new missions and operate with lower environmental and economic costs. However, uncontrolled flying objects could pose risks to air traffic as well as installations and people on the ground. The European Union Aviation Safety Agency (EASA) has defined a set of rules to guarantee the safety of drone operations, according to a risk based and proportional approach.

The Specific Operations Risk Assessment (SORA) enables defining the applicable Specific Assurance Integrity Level (SAIL) and determines the need for a Design Verification Report (DVR) from the agency.

Thales, in partnership with Aeromapper and ONERA, is the first company to be ever granted such a DVR by EASA for a complete drone system enabling operations in SAIL III conditions. Beyond demonstrating the value of the Group's expertise in avionics and certification combined with its innovation capability at the service of civil UAVs, it is a decisive step to deploy long range drones operations in Europe.

This European premiere is the result of close cooperation with EASA to define and validate the means of compliance to the Light UAS Special Condition. The solution is based on Thales ScaleFlyt avionics solution, integrated in AVEM 300 UAV and its CERBERE safety critical autopilot, provided by the innovative startup Aeromapper. ONERA, the French aerospace lab, conducted the safety analysis through the PHYDIAS R&T project financed by the French Authority DGAC.

“We are particularly proud to achieve such a premiere as it paves the way for wider deployment of secure long-range drone operations. The next milestone to make a step change for civil and governmental UAV operations will be to achieve DVR SAIL IV for Thales UAS100. Defence mission will benefit from AVEM 300 proven triplex avionics, CERBERE, since Aeromapper recently joined forces with Thales’ land and air systems activities” Marc Duval-Destin, VP Strategy, Product Policy and Innovation, Flight Avionics activities, Thales.

Thales UAS100 is secured by the ScaleFlyt avionics solutions used for the DVR. Next steps for its certification are already engaged with the agency and flight test campaign is ongoing, notably through a cooperation agreement with Centaurium UAS, a subsidiary of Switzerland-based Centaurium Group, which plans to provide drone services to Swiss authorities and industry players.

**82 . Date: 28-06-2024Armed ISR / ISTAR - MALE - Partnership - PayloadGA-ASI and LM Developing Net-Enabled Weapons Capability for MQ-9B SeaGuardianURL: https://www.asdnews.com/news/defense/2024/06/28/gaasi-lm-developing-netenabled-weapons-capability-mq9b-seaguardian**

General Atomics Aeronautical Systems, Inc. (GA-ASI) and Lockheed Martin (NYSE: LMT) are collaborating to provide Net-Enabled Weapons (NEW) capability for GA-ASI’s MQ-9B SeaGuardian® Unmanned Aircraft System (UAS). The addition of NEW capability for SeaGuardian will bolster the Intelligence, Surveillance, Reconnaissance and Targeting (ISR&T) capability for the aircraft.

The NEW technology provides expanded sensor targeting applications for the precision targeting of long-range weapons. SeaGuardian’s demonstrated persistence coupled with its vast array of precision targeting sensors enables more efficient kill chains, especially in contested environments. GA-ASI’s MQ-9B SeaGuardian® UAS, and SeaVue multi-role radar from Raytheon, an RTX business, will effectively leverage Lockheed Martin’s extensive NEW expertise to further refine targeting capabilities for future theater deployments. Initial testing was completed on June 5, 2024, with F/A-18s on the U.S. Navy’s W-289 test range in Southern California.

GA-ASI and Lockheed Martin have been developing Link 16 messages to communicate with weapons inflight using the SeaGuardian Systems Integration Lab (SIL) in preparation for overwater range test flight.

“This is a very important system attribute for SeaGuardian to enable naval long-range targeting CONOPS against high-end threats at much less risk to manned platforms,” said GA-ASI President David R. Alexander. “We appreciate Lockheed Martin’s support in helping us prove out the NEW technology, which is an important component of our ISR&T capability.”

MQ-9B SeaGuardian is a medium-altitude, long-endurance UAS. Its multi-domain capabilities allow it to flex from mission to mission. SeaGuardian has been used by the U.S. in several recent demonstrations, including Northern Edge, Integrated Battle Problem, and Group Sail.

**83 . Date: 08-07-2024ISR / ISTAR - Small - General - PlatformCutting-edge Stalker Mini Drone Undertakes Rigorous TrialsURL: https://www.asdnews.com/news/defense/2024/08/08/cuttingedge-stalker-mini-drone-undertakes-rigorous-trials**

Portable mini drones being delivered to the Armed Forces to provide cutting-edge capability have been put through rigorous trials at RNAS Predannack in Cornwall.

Under Project TIQUILA, Lockheed Martin’s Stalker VXE30 was subjected to almost 20 hours of trials in challenging weather conditions that pushed the platform to its limits.

As a step change in equipment procurement, Project TIQUILA will deliver cutting-edge small Uncrewed Air Systems (sUAS) to UK Forces at pace, whilst also offering spiral capability development opportunities throughout the life of the 10-year project.

In keeping pace with both technological and battlespace advances, Project TIQUILA is currently assessing the STALKER VXE30 and Indago 4 with both platforms providing superior ISTAR (Intelligence, Surveillance, Target Acquisition and Reconnaissance) for the User Community.

Of specific note, STALKER VXE30 and Indago 4 will enable the User to find and accurately locate targets at multiple ranges, across a variety of environments and conditions.

The recent trial was undertaken by an expert team made up of the Joint UAS Test and Evaluation Flight (JUAS TEF), part of 744 Naval Air Squadron (744 NAS), Air & Space Warfare Centre (ASWC) and Defence Equipment and Support’s TIQUILA Delivery Team.

As a key part of capability acceptance, the initial Flight trials provide an essential body of evidence to prove the equipment is capable and that it will provide value for money to both the User and the UK taxpayer. Whilst focussing on the STALKER VXE30 thus far, it is expected that the same sort of rigorous testing will next be conducted on the Indago 4 in due course.

Hannah Haggett, at DE&S said: "The REIVER series, as a vital part of Project TIQUILA, is the latest in a series of important T&E trials as part of the wider TIQUILA enterprise. It is crucial we provide the military with cutting-edge capabilities now but also equipment that can be continually upgraded to keep pace with emerging threats in an ever-evolving, demanding battlespace. Testing early and appropriately will underpin both capabilities and from the evidence generated from the trials thus far, the equipment is high quality and is performing as expected.”

In December 2022, it was announced that more than 250 mini drones would be delivered to the Armed Forces under a contract worth £129 million with Lockheed Martin UK, which supports jobs in Havant and Gloucester as well as across the wider UK supply chain.

Weighing a little over 20 kilogrammes and with a 4.88 metre wingspan, the STALKER VXE30 Air Vehicle (Av) is an operationally proven, vertical-launched, near-silent drone providing up to eight hours of imaging capability and able to range out to 60km.

Indago 4, a smaller quadcopter type Av, weighing only a little over 4 kilogrammes, can be folded and carried in a backpack and deployed in just three minutes, with a range of up to approximately 12 km.

Similar to the STALKER VXE30, the high-resolution camera system on the Indago 4 provides an exceptional zoom capability to accurately identify people, objects, vehicles and weapons, both in day and night conditions.

Both sUAS are on track and are expected to be operational by the front line by the end of 2024.

**84 . Date: 26-08-2024Component - General - Payload1st EagleEye Radar Comes Off the GA-ASI Production LineURL: https://www.asdnews.com/news/defense/2024/08/26/1st-eagleeye-radar-comes-off-gaasi-production-line**

* **New High-Performance Multi-Mode Radar Tailored for MDO**

On July 31, 2024, the first EagleEye multi-mode radar came off the production line of General Atomics Aeronautical Systems, Inc. (GA-ASI). The new radar is a high-performance system that delivers high-resolution, photographic-quality imagery that can be captured through clouds, rain, dust, smoke, and fog at multiple times the range of previous radars. EagleEye will be a “drop-in” radar enhancement for the U.S. Army’s current Gray Eagle Extended Range Unmanned Aircraft Systems (UAS) and is part of the initial configuration for the new Gray Eagle 25M (GE 25M) UAS. The Army National Guard has ordered 12 GE 25Ms.

“The EagleEye radar has improved range and multi-mode performance, which is tailored to the deep sensing capability required for Multi-Domain Operations (MDO),” said Jeff Hettick, GA-ASI vice president of Agile Mission Systems. “We look forward to delivering the EagleEye to our U.S. Army customer in the near future.”

Earlier this year, GA-ASI announced the development of a new Active Electronically Scanned Array (AESA) antenna and associated software for EagleEye, which will increase range and deliver significant mode enhancements. The radar’s increased range and optimized multi-mode performance allow the aircraft to operate well outside the Weapons Effects Zone of most threat systems, adding a layer of survivability that supports the Stand-Off survivability with Stand-In effects of long-range sensors, which is a key component of the Gray Eagle 25M being developed for the U.S. Army.

EagleEye is a multi-mode radar that builds on years of pioneering expertise by GA-ASI. Using Synthetic Aperture Radar (SAR), EagleEye enables operators to look in detail through atmospheric conditions that might obscure a purely visual sensor. And for the first time on the Gray Eagle platform, EagleEye delivers radar-based Full-Motion Video (FMV) capability called “Video SAR,” which enables live visual tracking of moving targets — even during heavy cloud cover. As part of the EagleEye development, GA-ASI has improved target detection range using real-time Artificial Intelligence/Machine Learning (AI/ML) software that runs on board the aircraft.

The EagleEye radar performs Moving Target Indication (MTI), detects changes, builds stripmaps, and yields other precise insights to analysts, commanders, and operators using industry-standard data formats. With its Maritime Wide Area Search (MWAS) mode, EagleEye also provides a dedicated maritime MTI mode for tracking and targeting vessels. This further supports the MDO mission set of the U.S. Army, particularly in support of the U.S. Indo-Pacific Command (INDOPACOM). The same mission is a focus for Europe, Africa, and the Middle East where there is an increased need for maritime reconnaissance, surveillance, and target acquisition, which is critical to achieve information dominance and overmatch.

**85 . Date: 28-08-2024Target Drone - Partnership - SoftwareNavy Partners With Shield AI to Enhance Autonomy in Naval AviationURL: https://www.asdnews.com/news/defense/2024/08/28/navy-partners-with-shield-ai-enhance-autonomy-naval-aviation**

The Navy’s Strike Planning and Execution program (PMA-281) and Aerial Targets program (PMA-208) recently partnered with Shield AI to integrate autonomy and artificial intelligence software into the BQM-177A sub-sonic aerial target, marking a significant milestone in furthering autonomous systems for real-world applications in naval aviation.

The Navy competitively awarded this effort to Shield AI, an industry leader in autonomous command and control of aviation platforms, Aug. 16, under an Other Transaction Authority (OTA) agreement facilitated by the Naval Aviation Systems Consortium (NASC).

“This collaborative effort between PMA-281, PMA-208, and Shield AI not only expands and improves the existing spectrum of validation but also offers a scalable solution that benefits the entire naval aviation community,” said Capt. Jerick Black, PMA-281 program manager. “By laying the groundwork for future advancements, this initiative ensures that the Navy remains at the forefront of technological innovation and operational excellence in naval aviation.”

Under the agreement Shield AI will integrate its Hivemind AI pilot software and deliver a robust prototype test bed using the BQM-177.

“This configuration of the aerial target facilitates rapid iteration by continuously refining and updating AI algorithms through real-world feedback, ensuring that the systems are robust, reliable, and ready for operational deployment,” said Johann Soto, PMA-281 software modernization team lead.

This test approach creates a seamless connection between simulation-based testing and live testing, allowing for a comprehensive and continuous feedback loop that enhances the effectiveness of the AI systems being developed, Soto said.  A technical demonstration is planned for late 2025.

“By leveraging the BQM-177A’s lower unit cost and cost per flight hour, this initiative provides a flexible and cost-effective testing environment that drives innovation at an accelerated pace,” said Greg Crewse, PMA-208 program manager.

The BQM-177A replicates modern subsonic anti-ship cruise missile threats in support of fleet training for both developmental and operational tests. It can support a variety of mission requirement by carrying a wide array of internal and external payloads.

**86 . Date: 04-09-2024 Component - General - Datalink Viasat Introduces Enhanced LAISR Service for Crewed and Uncrewed Airborne, Maritime and Land PlatformsURL: https://www.asdnews.com/news/defense/2024/09/04/viasat-introduces-enhanced-laisr-service-crewed-uncrewed-airborne-maritime-land-platforms**

* **On-demand, managed L-Band service offers a cost-effective, flexible solution for government mobile users**

Viasat Inc. (NASDAQ: VSAT), a global leader in satellite communications, today introduced Enhanced LAISR, its global mobility, on-demand managed L-band service offering communications flexibility for airborne, maritime and land users worldwide. It will deliver highly available, flexible, on-demand capabilities enabled by Viasat’s seamless, global L-band space and ground network.

The award-winning L-band Airborne Intelligence, Surveillance and Reconnaissance (LAISR) solution was developed to meet specific government requirements. It delivers cost-effective, high-speed beyond line-of-sight (BLOS) satellite communications (SATCOM) connectivity for mobile platforms via low size, weight and power (SWaP) user terminals. Military operations benefit from all-weather resilience and 99.9 percent network reliability.

As government organizations increasingly rely on highly mobile crewed and uncrewed Intelligence, Surveillance and Reconnaissance (ISR) missions worldwide, they need reliable, consistent SATCOM connectivity to transmit large volumes of data. Enhanced LAISR service will deliver on-demand, managed L-band network access to customers around the world, ensuring users can access the service whenever and wherever it is needed.

Customers will use the new Enhanced L-band Maritime Antenna (ELMA) and soon-to-be available LAISR-COTM (comms-on-the-move) terminal to connect to Enhanced LAISR services. Additional terminals are in development to provide access to the Enhanced LAISR service and deliver reliable, high-speed, seamless connectivity and uniform global capabilities via a further reduced SWaP form factor.

Steve Gizinski, Chief Technology Officer of Viasat Government, said, “Enhanced LAISR is the latest example of Viasat’s continuous focus on enhancing terminals and services to deliver additional value and resilience to our government customers as their needs evolve. With Enhanced LAISR, we are expanding upon the proven LAISR capability and our robust service level agreements to provide a highly flexible and accessible service to support crewed and uncrewed ISR missions worldwide.”

**87 . Date: 19-09-2024ISR / ISTAR - HALE - General - NavigationNGC Demos MQ-4C Triton Navigation Systems Over the Arctic OceanURL: https://www.asdnews.com/news/defense/2024/09/19/ngc-demos-mq4c-triton-navigation-systems-over-arctic-ocean**

Northrop Grumman Corporation (NYSE: NOC) successfully demonstrated the MQ-4C Triton navigation system's ability to operate at high latitudes deep within the Arctic Circle, delivering on its commitment to provide critical intelligence, surveillance, reconnaissance and targeting capabilities in the High North. The test flight proved the system's ability to operate in the harsh austere environment over the Arctic Ocean. Triton’s advanced technological design makes it the only autonomous high-altitude, long-endurance aircraft capable of operating at altitudes above 50,000 feet for durations of more than 24 hours.

* The test flight, which began in Deadhorse, Alaska, and flew within 100 miles of the North Pole, utilized Northrop Grumman’s proprietary navigation systems, mission management computer and upgraded operational flight programs to successfully demonstrate Triton's ability to navigate in the Arctic.
* The test aircraft collected navigation data during the five-hour flight and remained within U.S. and Canadian airspace for the duration.
* The demonstration also validated ground-based GPS alignment and initialization procedures to enable operations from runways above 70 degrees north latitude.
* As a high-altitude, long-endurance platform, Triton is suited for missions in the High North by operating well above Arctic winds and avoiding the range and speed impacts that limit mission performance at medium altitudes.

**Experts:**  
Jane Bishop, vice president and general manager, global surveillance division, Northrop Grumman: “Flight operations in austere and frigid conditions present unique navigation challenges. Our demonstration highlights Triton's ability to successfully perform in that challenging environment.”

Capt. Josh Guerre, Triton program manager, U.S. Navy: “Arctic regions are an increasingly important theater of operations with unique threats and environments. We are ready to support those mission sets for domestic and international customers.”

**Details:**  
The flight test follows a similar demonstration conducted over the Gulf of Alaska in June 2023. During the Northern Edge 2023 exercise, Triton’s radar demonstrated its unmatched ability to detect, track and image targets with weapon relevant accuracy and at a survivable range over a high-sea state environment.

As allies consider their options for acquiring uncrewed maritime surveillance aircraft, flight demonstrations prove Triton's ability to operate in challenging environments. Beyond navigation, surveillance operations in the High North are also challenged by strong winds and high seas. Triton’s higher operating altitude of more than 50,000 feet enables operation above inclement weather that would limit medium altitude platforms limited to 10,000-30,000 feet. Triton's de-icing and anti-icing capabilities ensure it’s mission-ready and capable of operations in extreme arctic conditions.

Built for the U.S. Navy and the Royal Australian Air Force, the multi-intelligence MQ-4C Triton supports a wide range of missions, including maritime patrol, signals intelligence and search and rescue. These aircraft operate at a higher altitude and have longer endurance than medium-altitude systems. They also incorporate simultaneous multi-intelligence sensor operations that allow them to deliver an exponential increase in mission information.

**88 . Date: 02-10-2024Solar ISR / ISTAR - HALE - General - PlatformAV Successfully Flight Tests New Solar-Powered Aircraft, Redefines Stratospheric Payload CapabilitiesURL: https://www.asdnews.com/news/defense/2024/10/02/av-successfully-flight-tests-new-solarpowered-aircraft-redefines-stratospheric-payload-capabilities**

AeroVironment (AV) flight-tested an upgraded Sunglider™, enhancing its High-Altitude Platform-Station (HAPS) capabilities for commercial and government markets. The result is Horus™ A, the new version of Sunglider for government applications. Horus A is a solar-powered UAS capable of carrying up to 150 lb of payload with 1.5 kW of available power, offering industry-leading stratospheric performance.

Horus A features enhancements in all areas of the aircraft design, avionics, and offers unique features such as additional autonomy to increase mission flexibility and multiple redundant systems for mission assurance. Horus A received airworthiness approval from the U.S. Army and an FAA Special Airworthiness Certificate to allow flight testing in the national airspace. These enhancements flow back into the continued development of Sunglider with SoftBank as both companies strive to deliver unrivaled payload capacity and persistence to unlock the full potential of both stratospheric flight and the latest, most capable payloads.

"During this recent Horus A flight, we demonstrated the ability to carry multiple payloads for the U.S. DoD and transmit real-time data, advancing the viability of HAPS for government applications," said Jeff Rodrian, AV’s senior vice president and general manager of MacCready Works. "This flight marks another milestone in our stratospheric platform’s progress. It underscores AV’s leadership in developing solar-powered, high-altitude systems with significant potential for commercial and government applications."

Continuing AV’s tradition of industry-defining firsts, Horus A simultaneously operated a Synthetic Aperture Radar (SAR), and Tactical Grade Mesh Network radio during the mission portion of the flight. Covering the majority of the flight test points, AV was able to validate multiple new and redundant systems, payload interoperability and performance enhancements. AV also demonstrated the ability to effectively maneuver in adverse and turbulent weather, landing safely, ready to return to the Stratosphere for future longer-duration missions. Horus A’s satellite-based BLOS radio and robust avionics and datalink suite will enable this platform to fill critical defense capability gaps such as resilient communications and network extension, Assured Positioning, Navigation and Timing (APNT), Space Domain Awareness, long-endurance ISR, and deep sensing. Many of these capabilities can enable swarms of smaller uncrewed systems like Switchblade® 600 to be most effective on the battlefield.

After this recent stratospheric flight, which was supported by the Office of the Under Secretary of Defense Research and Engineering, and the Rapid Prototyping Programs, AV will continue aggressively progressing Horus A towards operational employment. Through continued partnership with SoftBank, the company aims to offer a robust connectivity solution in the world of 5G and beyond with Sunglider.

**89 . Date: 02-10-2024Acquisition - Patria Received Authority Approval for the Nordic Drones Acquisition and Transaction of Open Source Data Collection Product and Business from WithsecureURL: https://www.asdnews.com/news/defense/2024/10/02/patria-received-authority-approval-nordic-drones-acquisition-transaction-open-source-data-collection-product-business-withsecure**

Patria announced on 13 June, 2024 about the acquisition of a leading manufacturer of drone systems Nordic Drones Oy and on 4 September, 2024 about the acquisition of an open source data collection product and business related to its cyber business area from WithSecure.

The completion of both acquisitions required the approval of the Finnish Ministry of Employment and the Economy (‘TEM’) and the authority process has now been completed. The acquisitions will not affect customer commitments, employment relationships or other commitments made by the company or business area. The businesses will be transferred to Patria on 1 October, 2024.

**90 . Date: 11-10-2024Partnership - SoftwareAirbus and European Partners Demonstrate Collaboration Between Helicopters and Unmanned SystemsURL: https://www.asdnews.com/news/defense/2024/10/11/airbus-european-partners-demonstrate-collaboration-between-helicopters-unmanned-systems**

Airbus Helicopters and its partners have conducted a full scale demonstration of a manned-unmanned teaming (MUM-T) system developed as part of a project funded by the European Union and code-named MUSHER. The demonstration took place in France and Italy from 30 September to 9 October and involved multiple manned helicopters and unmanned systems connected to a single MUM-T network.

"Operating helicopters and unmanned aerial systems in concert provides valuable additional mission capabilities such as increased situational awareness with UAS sharing video in real time for improved decision-making, all while preserving critical assets and resources," said Bruno Even, CEO of Airbus Helicopters. "The success of the MUSHER demonstration is a major step forward for our ambition at Airbus which is to field MUM-T capabilities by bringing European industrial know-how together for the benefit of military and civil customers," he added.

The experiment was led by Airbus, which deployed the H130 FlightLab as a manned platform and the VSR700 unmanned aerial system (UAS) on a DGA test range. Meanwhile, Leonardo performed the demonstration with a helicopter and an optionally piloted vehicle. Thales, coordinator of the MUSHER project, provided a supervision station and a mission debriefing station. Space Applications Services was in charge of the mission preparation station. Indra led simulation activities in preparation for the demonstration, while ONERA provided studies on crew workload.

The MUSHER demonstration consisted of various scenarios involving the different aircraft flying simultaneously in France and in Italy. The missions were based on concepts of operations defined by the ministries of defense of France, Italy and Spain. One scenario, for example, showcased UAS and manned helicopters for an anti-piracy mission. The UAS was initially conducting a surveillance mission. Once it spotted suspicious activity on a boat, the manned helicopter joined the scene and took full control of the UAS in preparation for an intervention.

The in-flight testing aimed at demonstrating levels of interoperability (LOI) 2 to 4, from direct receipt of UAS data by the manned helicopters and the ground station, to the control and monitoring of the UAS from the helicopters. The demonstration also served to prove that manned helicopters and UAS from different companies and different countries, operating in distant areas, could be integrated within a single MUM-T system.

MUSHER is a project launched in the frame of the European Defence Industrial Development Programme (EDIDP) launched by the European Commission in December 2021. The project aims at developing a generic European MUM-T system that can operate robustly in multiple environments (civil, military or mixed), whilst reducing the crew’s workload and delivering maximum capacity in operation.

**91 . Date: 07-11-2024Armed ISR / ISTAR - HALE - General - GCSGA-ASI and US Navy Fly MQ-20 Avenger Using MD-5 GCS To Perform Commanded Autonomy ManeuversURL: https://www.asdnews.com/news/defense/2024/11/07/gaasi-us-navy-fly-mq20-avenger-using-md5-gcs-perform-commanded-autonomy-maneuvers**

On November 5, 2024, General Atomics Aeronautical Systems, Inc. (GA-ASI) used its MQ-20 Avenger® Unmanned Aircraft System to perform commanded autonomy maneuvers as part of a demonstration with the U.S. Navy (USN). The USN used its MD-5 Ground Control Station (GCS) with Lockheed Martin’s MDCX™ autonomy platform to command and control the jet-powered UAS. Working collaboratively with the USN and Lockheed Martin, the GA-ASI team successfully executed the flight demonstration over a Proliferated Low Earth Orbit (PLEO) datalink.

The USN’s Unmanned Carrier Aviation program office PMA-268 used GA-ASI’s MQ-20 as a surrogate to demonstrate how its Unmanned Carrier Aviation Mission Control Station (UMCS) can command a variety of unmanned aircraft. The MD-5 GCS was operated from the USN’s test facility at Patuxent River, Maryland, while the MQ-20 was flown out of GA-ASI’s Desert Horizon flight operations facility in El Mirage, California.

This flight was the first time a GA-ASI UAS completed bi-directional communications using the UMCS operation codes while performing autonomous behavior. The procedure was completed using the PLEO datalink.

“This effort was a prime example of industry partners and government agencies working together to perform important new capabilities,” said GA-ASI President David R. Alexander. “The team efficiently and safely demonstrated aircraft flight control from another government agency’s control station. Using GA-ASI’s Tactical Autonomy Core Ecosystem (TacACE) software, the team not only executed airborne commands, but did so in a safe, controlled environment.”

The demonstration was part of an effort to advance technology for future Collaborative Combat Aircraft (CCA). GA-ASI initiated the demonstration between PMA-268 and Lockheed Martin’s Skunk Works to demonstrate connectivity between the Navy’s UMCS and GA-ASI’s MQ-20 Avenger. MQ-20 is a jet-powered platform used extensively as a CCA surrogate test bed for autonomous UAS technology development. GA-ASI was recently selected for the U.S. Air Force’s CCA program.

**92 . Date: 12-11-2024Partnership - JSW Defence & Shield AI Forge Strategic Partnership To Bring Cutting-Edge Military Aircraft Technology To IndiaURL: https://www.asdnews.com/news/defense/2024/11/12/jsw-defence-shield-ai-forge-strategic-partnership-bring-cuttingedge-military-aircraft-technology-india**

**JSW Group To Invest $90 Million Over The Next Two Years**

JSW Defence Pvt. Ltd., part of the $24 billion JSW Group and Shield AI, Inc, a leading U.S defense technology company, today announced a strategic partnership to indigenize and manufacture Shield AI’s “V-BAT,” a Group 3 Unmanned Aerial System (UAS). This collaboration marks a significant step in boosting India’s defense capabilities by bringing in world-class UAS technology to the country.

As part of the partnership, the JSW Group will invest around $90 million in the next two years, with $65 million allocated in the first 12 months to establish JSW’s global compliance program, a manufacturing facility to ensure proper technology licensing, and training of manpower. This investment will enable JSW to establish a local supply chain and create an advanced facility in India for manufacturing, assembling and testing V-BAT aircraft. This effort will enable large-scale production of V-BATs in India to serve the needs of the Indian Armed Forces and also function as a global production hub for Shield AI.

The V-BAT is a fixed-wing, vertical take-off and landing (VTOL), long endurance intelligence, surveillance, reconnaissance (ISR) platform, currently deployed by multiple armed forces around the world, including the United States’ Marine Expeditionary Units (MEUs). It provides cutting-edge ISR functionality in a highly tactical system, capable of being forward deployed in complex and adversarial territory in order to provide a range of flexible solutions to special forces, front-line infantry, armored and artillery units. V-BAT has a unique patented ducted design with the advantage of a small logistics footprint and ease of rapid deployment.

**93 . Date: 14-11-2024ISR / ISTAR - Mini - General - SoftwareAV Unveils Advanced Software Updates to Enhance Puma UAS Capabilities in Contested EnvironmentsURL: https://www.asdnews.com/news/defense/2024/11/14/av-unveils-advanced-software-updates-enhance-puma-uas-capabilities-contested-environments**

AeroVironment (AV) announces a powerful suite of software updates, called Project GOLD, that elevate the battlefield effectiveness of its Puma™ 3 AE and Puma™ LE, in contested environments. The new updates bolster the Puma uncrewed aircraft systems (UAS) to maintain reliable navigation and mission performance even when GNSS and communications signals are unreliable, unavailable or deliberately jammed. The software-only upgrades ensure Puma UAS can continue mission-critical tasks autonomously and securely, reducing reliance on GPS and enhancing survivability in hostile areas.

**Featured Updates:**

* GPS-Denied Capabilities: Puma 3 AE and Puma LE now support additional advanced Assured Position Navigation and Timing (APNT) capabilities in GNSS denied environments.
* Visual Navigation (VNS): Providing greater capability utilizing Puma’s VNS system with end-to-end GNSS-denied operation and an additional layer of GNSS spoofing detection and rejection.
* Enhanced Radio Security: Enhanced security features with the latest software and UI/UX ensuring robust communications in contested environments.
* Increased Payload: Software update allows for 60% increase in Puma 3 payload capacity, up to 6.5lbs of total payload for advanced multi-mission support.

“With these software enhancements, we’re reinforcing the adaptability and resilience of our Puma Systems for the most demanding battlefield conditions,” said Trace Stevenson, AV’s senior vice president and general manager of Uncrewed Systems. “These capabilities allow warfighters to maintain operational superiority, even when adversaries attempt to disrupt critical systems, ensuring greater mission success and survivability.”

These new capabilities are delivered through software updates, requiring no hardware modifications to existing systems, thus offering a cost-effective and rapid upgrade path for deployed fleets. All new Puma systems will include these features, and currently fielded units can be easily upgraded using the Puma Software Update Kit.

**1 . Date: 19-11-2024Armed ISR / ISTAR - MALE - General - Engine / PowersourceGA-ASI Completes Final Qualification Test for HFE 2.0 EngineURL: https://www.asdnews.com/news/defense/2024/11/19/gaasi-completes-final-qualification-test-hfe-20-engine**

On Nov. 13, 2024, General Atomics Aeronautical Systems, Inc. (GA-ASI), completed its final qualification test for its new 200-horsepower heavy fuel engine at its El Mirage, California, flight facility. The Heavy Fuel Engine (HFE) 2.0 is a highly reliable low-maintenance engine with a 40 percent increase in service life providing longer maintenance-free operational periods. The engine will provide the horsepower and electrical power required to meet the demanding performance needs of the new Gray Eagle 25M for Multi-Domain Operations (MDO).

The three-week qualification test of the HFE 2.0 engine is aligned with the Federal Aviation Administration’s endurance test requirements (FAA 14 CFR 33.49) as the FAA’s primary performance standard for engines to be used in commercial aviation. Over the last 18 months, HFE 2.0 excelled in strenuous durability testing that included 2,450 full power cycles simulating high stress conditions during three extensive test profiles of 200, 400, and 651 hours. Additionally, the engine completed 50 hours of flight testing across the flight envelope.

“This test is the culmination of the extensive durability and flight test program for the HFE 2.0 engine,” said GA-ASI President David R. Alexander. “It’s been great to see the outstanding test results that have validated the design and development of the HFE 2.0 engine we have worked on so passionately for the past seven years and to bring this world-class engine to the Gray Eagle fleet.”

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

GA-ASI and its General Atomics Europe affiliate partnered with global leaders in high-performance engines — supported by propulsion technology innovator Cosworth — to develop an engine on the company’s internally funded research and development program. GA-ASI also brought in General Atomics Electromagnetic Systems to design and build the engine’s dual brushless generator, which will dramatically reduce field maintenance and is designed to be a drop-in replacement for the existing generator. The enhanced generator will deliver over 50 percent more electrical power to support newly available payloads for the MDO mission.

After completion of the FAA engine endurance test, next steps call for the U.S. Army certification process to allow authorization of the HFE 2.0 for use on the existing fleet of GA-ASI’s Gray Eagle Extended Range (GE ER) Unmanned Aircraft System (UAS) as a replacement for the 180-horsepower engine that is reaching its end of life. HFE 2.0 is also the cornerstone of the modernized Gray Eagle 25M (GE 25M) UAS currently being produced under a U.S. Army-funded program to support future MDO UAS missions.

**3 . Date: 09-12-2024Partnership - Rheinmetall and Auterion Are Working Together on Drone Technology and Developing Standard Operating System for Military IndustriesURL: https://www.asdnews.com/news/defense/2024/12/09/rheinmetall-auterion-are-working-together-drone-technology-developing-standard-operating-system-military-industries**

Rheinmetall, a leading system supplier for defence technology and Auterion, the leading supplier of drone operating systems, will be working closely together to develop standardised software-based components for unmanned drone systems. The two companies signed an agreement, thereby establishing a long-term co-operation.

The two partners are combining their expertise in order to create a military industry standard for controlling and operating unmanned aerial, land and naval drone systems. The co-operation includes joint product development and sales activities for unmanned platforms. The resulting homogeneous operating system is expected to provide military users with a significant advantage.

As a drone manufacturer, Rheinmetall is drawing on the operational experience gained from the Luna NG and Aladin systems and incorporating it into its work with the customer. Various drone systems from the Düsseldorf-based technology group have already been in service for many years with the German Armed Forces / Bundeswehr and have been deployed in Ukraine for several months.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

Dr Timo Haas, Chief Digital Officer at Rheinmetall AG, explains: “We see over two hundred different aerial unmanned systems in Ukraine. This makes military training very costly and time-consuming, and system interoperability is not guaranteed. Co-operation with Auterion and the development of a homogeneous operating system will enable the efficient and scalable deployment of unmanned systems. With our approach, there will be no need for system-dependent user training or system-specific integration into an overall system network in the future”.

Lorenz Meier, CEO of Auterion: “In the future, drones will be used in large quantities and, like computers and smartphones, they need a common operating system to make this happen. AuterionOS allows the customer to combine all drones on a common basis and to integrate different manufacturers into a common architecture. Our software stack has already been tried and tested in operation and thus enables software-defined defence”.

**4 . Date: 10-01-2025Contract - 30,000 New Drones for Ukraine in Boost to European SecurityURL: https://www.asdnews.com/news/defense/2025/01/10/30000-new-drones-ukraine-boost-european-security**

30,000 drones will be sent to Ukraine after £45 million worth of contracts were placed by the international Drone Capability Coalition, co-led by the UK and Latvia as the UK steps up leadership supporting Ukraine in 2025.

Defence Secretary John Healey announced this milestone alongside Latvian Defence Minister Andris Spruds at the Ukraine Defence Contact Group held at Ramstein Air Base today [Thursday 9 January].

Healey arrived last night for talks with the US Secretary of Defense Lloyd Austin at the US Air Base.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

The Drone Capability Coalition supports Ukraine with uncrewed surveillance and attack capabilities. Funding for the new 30,000 drones comes from UK, Denmark, Netherlands, Latvia and Sweden.

These state-of-the-art, first-person view drones will help Ukraine fight against Russian aggression, allowing Ukraine’s Armed Forces to manoeuvre past Russian air defences to target enemy positions and armoured vehicles.

Today’s announcement follows the UK’s £7.5 million investment for the Drone Capability Coalition’s Common Fund, set out in November, and brings the UK’s total investment in the fund to £15 million to date. So far, the fund has raised around £73 million from the UK and partners.

As well as this, the Defence Secretary confirmed that the UK-administered International Fund for Ukraine now stands at over £1.3 billion, of which the UK has contributed £500 million.

He also outlined the Ministry of Defence’s plan for Ukraine’s Defence in 2025 to more than 50 allies and partners gathered for the meeting. John Healey discussed the plan with Ukrainian Defence Minister Rustem Umerov in Kyiv in December.

Defence Secretary John Healey MP said: "The fierce courage of the Ukrainian people continues to inspire the world, and this meeting of more than 50 nations sends a clear message to Putin about the international community’s unwavering support for Ukraine."

"I am proud of the UK’s leadership in supporting Ukraine. From heading coalitions which are delivering essential equipment alongside allies, to training recruits, we’re standing strong with Ukraine against Putin’s aggression."

"Our commitment to provide £3 billion a year of military aid for as long as it takes will ensure Ukraine can defend themselves and is essential to protect the security of the UK – because the defence of the UK starts in Ukraine."

In a further sign of the strength of international support for Ukraine’s efforts to repel Russia’s illegal invasion, more than £190 million of extra funding has been committed to the UK-administered International Fund for Ukraine by allies and partners, with Portugal and Germany contributing for the first time.

The fund uses financial contributions from international partners to rapidly procure priority military equipment for Ukraine. The new contributions include:

Since taking office in July, the government has stepped up international leadership supporting Ukraine and demonstrated its ironclad support, committing to £3 billion of military support to Ukraine every year for as long as it takes. In October, an extra £2.26 billion was announced, using the profits from seized Russian assets.

The meeting of allies and partners at Ramstein follows the Defence Secretary’s visit to Kyiv last month, where he met with his counterpart Rustem Umerov, to discuss the priority areas for UK defence support and announced a new £225 million package, including £186m from the International Fund for Ukraine, of military support.

The government is clear that the UK’s defence starts in Ukraine, and that providing military support is essential to promote both the UK’s national security and stability in Europe.

As part of the Plan for Ukraine’s Defence in 2025, the UK’s continued leadership on the war in Ukraine throughout 2025 will see an increase to Ukraine’s military capability; will build on the success of Operation Interflex by enhancing the training offered to Ukraine; will strengthen defence industrial cooperation; will increase cooperation with our allies to support Ukraine; and will increase pressure on Russia.

**5 . Date: 13-01-2024H-Rotary - Armed ISR / ISTAR - MALE - Contract - Schiebel Camcopter S-300 UAS Selected for Major European Defence ProjectURL: https://www.asdnews.com/news/defense/2025/01/13/schiebel-camcopter-s300-uas-selected-major-european-defence-project**

Schiebel, as part of the SEACURE consortium led by Thales, has been awarded a grant agreement under the European Defence Fund’s call for unmanned anti-submarine and seabed warfare solutions.

The SEACURE (Seabed and anti-submarine warfare capability through unmanned feature for Europe) consortium consists of 35 companies from 13 European countries and aims to progress joint Anti-Submarine Warfare (ASW) and Seabed Warfare (SBW) with unmanned air, surface and underwater systems protecting critical maritime infrastructure. The focus is on detection, classification, identification and tracking of underwater threats in demanding conditions.

Schiebel's latest product, the CAMCOPTER® S-300, will serve as the dedicated Unmanned Air System (UAS) for this project. With a maximum take-off weight of 700 kg, the S-300 offers an impressive endurance in excess of 24 hours with a camera and Inverse Synthetic Aperture Radar (ISAR) or typically 6 hours with a 250 kg payload. It is the first operational VTOL in its class to achieve these capabilities. The SEACURE project is scheduled to culminate in a large-scale sea trial by 2028.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

“We have been working successfully with Thales on various ASW solutions for the S-100 since our first participation at the NATO exercise REPMUS in 2022. Due to its longer endurance and higher payload capacity, the S-300 opens up a multitude of new possibilities for ASW and SBW. The SEACURE project aligns perfectly with our S-300 development roadmap and we’re proud to be part of such a significant project,” said Hans Georg Schiebel, Chairman of the Schiebel Group.

**6 . Date: 22-01-2025Hybrid Rotary / Fixed Wing - Cargo - Small - Partnership - Avy and NLR Partner to Drive Drone InnovationURL: https://www.asdnews.com/news/defense/2025/01/22/avy-nlr-partner-drive-drone-innovation**

NLR has partnered with Avy, a Dutch company that develops autonomous fixed-wing drones tailored for humanitarian, health, and environmental missions, with a focus on creating a sustainable impact. NLR has acquired an Avy drone for testing and evaluation, aiming to drive innovation in aerospace applications. This collaboration supports the development of sustainable and cutting-edge drone technology.

Avy, a pioneer in autonomous sustainable drone solutions, has entered into a strategic collaboration with Royal Netherlands Aerospace Centre (NLR), a leading authority in aerospace research and innovation. As part of this partnership, NLR has acquired an Avy latest generation Aera Unmanned Aerial Vehicle (UAV) for testing and operational evaluation. Additionally, NLR will leverage its expertise to help Avy audit and enhance its operational capabilities.

The Avy Aera, recognized for its emission-free and autonomous flight capabilities (Beyond Visual Line of Sight), will be integrated into NLR’s research programs. These programs focus on testing innovative aerospace applications, including emergency response, monitoring and urgent logistics. The Aera’s capabilities, such as long-range autonomous flight up to 100km, and advanced safety features, make it an ideal fit for NLR’s pioneering initiatives.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

Simultaneously, NLR’s collaboration with Avy extends beyond product deployment. As part of its commitment to develop excellence in aerospace practices, NLR will conduct a comprehensive audit of Avy’s operations. This process aims to ensure Avy’s workflows align with industry-leading standards and guarantee optimal performance across product design, manufacturing, deployment, and regulatory compliance.

“Partnering with NLR is a significant milestone for Avy,” states Benjamin van der Hilst, CEO of Avy. “Their expertise in aerospace innovation and rigorous operational auditing will accelerate our mission to revolutionize UAV solutions while maintaining the highest standards of quality and sustainability.”

Michel Peters, CEO of Royal NLR, fully agrees: “It is a core objective of NLR to support the Dutch aviation industry in establishing a strong position in the UAM supply chain. Therefore, we’re very pleased to test the potential of this sustainable and innovative designed Dutch drone in various applications while supporting Avy in enhancing their operational frameworks.”

**7 . Date: 23-01-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Mini - Contract - Red Cat Secures $518K in New Orders for Edge 130 Drones from US Government AgenciesURL: https://www.asdnews.com/news/defense/2025/01/23/red-cat-secures-518k-new-orders-edge-130-drones-us-government-agencies**

Red Cat Holdings, Inc. (Nasdaq: RCAT) ("Red Cat" or the "Company"), a drone technology company integrating robotic hardware and software for military, government, and commercial operations, today announced it has secured new orders for its Edge 130 drone from the Army National Guard and another U.S. Government Agency (OGA), totaling $518,000.

FlightWave, a leading provider of VTOL drone, sensor and software solutions was acquired by Red Cat in September 2024. The acquisition brought FlightWave’s flagship drone, the Edge 130 Blue into its family of low-cost, portable unmanned reconnaissance and precision lethal strike systems. FlightWave’s size, weight and vertical take off capabilities makes it ideal for maritime operations and littoral environments.

The combined orders, which amount to 12 Edge 130 drones, reflect Red Cat’s continued momentum in providing advanced drone technology solutions to key defense and security customers. The Edge 130 is known for its robust capabilities, including long-endurance flight times, AI-driven surveillance features, and operational effectiveness in a variety of mission-critical environments.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

“These new orders further validate the performance and unique capabilities of the Edge 130 as part of our Family of Systems and reinforce our position as a trusted provider of drone solutions for government and military applications,” said Jeff Thompson, Red Cat CEO. “We are expanding our manufacturing capacity for the Edge 130 to accelerate this momentum and remain committed to supporting U.S. government agencies with the industry’s best technology that enhances their mission capabilities and success.”

The Edge 130 Blue is a UAS-certified military-grade tricopter for long-range mapping, inspection, surveillance, and reconnaissance needs. Designed specifically for government and military applications, the Edge 130 Blue can be assembled and hand-launched in just one minute by a single user to capture high-accuracy aerial imagery with medium-range autonomy. Weighing in at only 1200g, the Edge has a 60+ minute flight time in forward mode, an industry-leading endurance among all other Blue UAS-approved drones available.

**8 . Date: 13-02-2025Fixed Wing - Loitering Munition - Mini - General - Helsing to Produce 6,000 Additional Strike Drones for UkraineURL: https://www.asdnews.com/news/defense/2025/02/13/helsing-produce-6000-additional-strike-drones-ukraine**

Helsing, the leading European defence technology company, today announced that it is producing 6,000 HX-2 strike drones for delivery to Ukraine. This follows a previous order of 4,000 HF-1 strike drones which are currently being delivered to Ukraine, in partnership with Ukrainian industry. The new batch of drones makes Helsing one of the largest strike drone manufacturers globally.

Unveiled in late 2024, HX-2 is an electrically propelled X-wing precision munition with up to 100 km range. Advanced on-board AI enables full resistance to electronic warfare. When operating as part of Helsing’s Altra recce-strike software, multiple HX-2 can assemble into swarms, controlled by single human operators. HX-2 has been designed to be mass-producible and at significantly lower unit cost than conventional systems, thus filling a growing capability gap in modern land warfare.

In addition, Helsing is announcing the completion of the first Resilience Factory in Southern Germany.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

Resilience Factories are Helsing’s high-efficiency production facilities designed to provide nation states with local and sovereign manufacturing capacities. Helsing is set to build Resilience Factories across the European continent, with the ability to scale manufacturing rates to tens of thousands of units in case of a conflict.

The first Resilience Factory (RF-1) is operational in Southern Germany and has an initial monthly production capacity of more than 1,000 HX-2.

Gundbert Scherf, co-founder of Helsing, said: “We are scaling up production of HX-2 in response to additional orders from Ukraine, where precision mass is offsetting a numerical disadvantage in legacy systems on a daily basis. It is clear that NATO has important lessons to learn, and fast. With our Resilience Factories, we are taking a distributed approach towards mass manufacturing these systems across Europe, allowing individual nation states to produce locally and ensure sovereignty of production and supply chain.”

Niklas Köhler, co-founder of Helsing said: “We have assembled Europe’s world-leading manufacturing talent to completely rethink and develop a new generation of mass producible effects. Our Resilience Factories combine software-first design with scalable manufacturing techniques. We solve the hard problems in the software layer, not the electronics. This generates affordable precision mass, deters adversaries, and protects our democracies. HX-2 is just the first of a whole range of products based on this premise.“

**9 . Date: 17-02-2025Partnership - General Atomics and EDGE Establish Partnership To Manufacture, Test and Repair Electromechanical SystemsURL: https://www.asdnews.com/news/defense/2025/02/17/general-atomics-edge-establish-partnership-manufacture-test-repair-electromechanical-systems**

EPI, an entity of EDGE Group and the cornerstone of precision engineering in the UAE’s aerospace, oil and gas, and defence industries, has signed a Memorandum of Understanding (MoU) with General Atomics-Systems Integration, an affiliate of General Atomics.

The signing ceremony was held on February 17, 2025, at the Abu Dhabi National Exhibition Centre during the International Defence Exhibition and Conference (IDEX) 2025.

“Through this collaboration, EPI will significantly expand its capabilities. This will include the establishment of a state-of-the-art facility to support the production of electromechanical systems,” said Michael Deshaies, CEO of EPI.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

“Working with EPI will mark a leap forward in the development and manufacturing of this advanced aviation technology,” said General Atomics-Systems Integration Vice President Scott Sappenfield. “We expect to offer safe, affordable, high-performance solutions to replace legacy systems in military and commercial aircraft.”

This project is enabled by the Tawazun Council (Tawazun Economic Program). A key milestone in the project will be the certification of EPI’s facility as a Part 145 repair centre. This will involve the production airworthiness certification process and the test and evaluation of prototype units, ensuring compliance with the highest industry standards.

**10 . Date: 18-02-2025Partnership - EDGE Group and Leonardo Sign Groundbreaking Collaboration AgreementURL: https://www.asdnews.com/news/defense/2025/02/18/edge-group-leonardo-sign-groundbreaking-collaboration-agreement**

EDGE, one of the world’s leading advanced technology and defence groups, and Leonardo, a major global industrial group that builds technological capabilities in aerospace, defence, and security, have signed a groundbreaking collaboration agreement to further enhance their partnership in developing solutions across six critical domains. The agreement aims to strengthen existing synergies and capitalise on new complementary opportunities for deeper cooperation.

The pivotal agreement, signed at the International Defence Exhibition (IDEX) 2025, currently taking place in Abu Dhabi, establishes a strategic framework for the UAE market while advancing a global export strategy. It aims to enhance synergies, facilitate knowledge exchange, and optimise specialised resources to capitalise on emerging opportunities more effectively. The collaboration will focus on key domains: Airborne Capabilities including Radar – particularly for Multi Mission Aircraft; Anti-Tactical Ballistic Missile Defence; Counter-Drone and Mobile Surveillance Systems; Naval Combat Management Systems; Radio Communications; and Optronics Commander Sight.

Hamad Al Marar, EDGE Group Managing Director & CEO, said: “This important step marks the next phase in our existing strategic agreement with industry leader Leonardo, building on the opportunities presented by the strong relationship between the UAE and Italy. Fundamentally, however, it reinforces our vision of growth through mutually beneficial partnerships, ensuring a win-win approach to sourcing and realising complementary multi-domain opportunities across the world, and expanding these synergies for continued economic growth, innovation, and excellence, all in support of the sustainable preservation of security.”

Market forecasts by Region, Platform, Product, and End-User. Country Analysis, Market and Technology Overview, Opportunities and Impact Analysis, and Leading Company Profiles

The agreement is a precursor to a structured partnership focused on jointly marketing these products and solutions to governments across multiple countries. It also commits to the development of shared intellectual property (IP) and future design innovations.

Lorenzo Mariani, Co-General Manager of Leonardo, added: “We are deeply honoured and thrilled to collaborate with EDGE Group, aiming to establish unprecedented industrial capabilities for national and export requirements. The sectors identified as pillars of this joint strategy are getting more and more important in an evolving market and operational scenario. That is why we believe that joining forces in these fields will deliver the level of capabilities that the UAE and other export markets are requiring.”

The strategic agreement aims to further enhance the capabilities of both EDGE and Leonardo in the design of cutting-edge, complex systems in disruptive sectors with significant market potential, and is a crucial step in diversifying and expanding both groups’ portfolios of airborne, terrestrial, naval, and cyber solutions.

**11 . Date: 18-02-2025General - SoftwareElbit Unveils Dominion-X: Advanced Autonomous Management Operating System for Unmanned PlatformsURL: https://www.asdnews.com/news/defense/2025/02/18/elbit-unveils-dominionx-advanced-autonomous-management-operating-system-unmanned-platforms**

Elbit Systems Ltd. is proud to announce the launch of Dominion-X, its next-generation state-of-the-art autonomous management operating system for unmanned platforms. Dominion-X offers advanced capabilities for planning, operating, and managing diverse robotic platforms and payloads across multiple domains. Built on a robust, proven software stack, Dominion-X maximizes the operational potential of Unmanned Aerial Systems (UASs) and Unmanned Ground Vehicles (UGVs). It ensures full terrain dominance, including the above-ground domain, thus enabling a complete C4I system with CUAS infrastructure.

Based on lessons learned from the battlefield and years of accumulative knowledge, the new open architecture operating system can be integrated with a wide variety of platforms and payloads, enabling adaptive, complex, and collective behaviors. This enables unmanned systems to move with immunity and make smarter decisions. Dominion-X fosters human-swarm teaming, facilitating seamless interaction, influence, and behavioral inference. It delivers large-scale, distributed sensing capabilities with advanced information fusion and distillation for superior situational awareness and terrain dominance. Additionally, Dominion-X ensures adaptive, resilient, and efficient sharing and storage of distributed information, even in fragmented operational environments. It simplifies the deployment, support, and maintenance of large-scale unmanned systems, enhancing operational efficiency and system longevity.

Key Features and Advancements:

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

With Dominion-X, Elbit Systems continues to lead the way in unmanned systems innovation, setting new standards for autonomy, flexibility, and mission success.

**12 . Date: 18-02-2025Partnership - SimulationGA-ASI and CAE Sign Long-Term Agreement MQ-9B SkyGuardian Mission TrainerURL: https://www.asdnews.com/news/defense/2025/02/18/gaasi-cae-sign-longterm-agreement-mq9b-skyguardian-mission-trainer**

General Atomics Aeronautical Systems, Inc. and CAE are pleased to announce a long-term agreement for the development and production of the next-generation mission trainer for GA-ASI’s MQ-9B SkyGuardian® remotely piloted aircraft system (RPAS). The contract with GA-ASI includes a firm order for 11 mission trainers, with the opportunity to deliver up to 50 devices over the next five years. The agreement brings together two industry leaders to enhance the training capabilities for operators of MQ-9B and builds on the long-standing business relationship between GA-ASI and CAE.

Recognized globally as the reference in synthetic training for RPAS, CAE leverages the latest visualization technology in the development of the next-generation MQ-9B SkyGuardian Mission Trainers. The trainers will employ the CAE Prodigy Image Generator to provide a highly realistic training environment to replicate flight operations. Powered by a state-of-the-art gaming engine, CAE Prodigy elevates training standards through an enhanced immersive training environment, high-fidelity graphics, and physics-based simulation. This cutting-edge technology enhances the realism and effectiveness of the training, ensuring that operators are well-prepared for their missions.

MQ-9B is the world’s most advanced RPAS delivering exceptionally long endurance and range, with auto takeoff and landing under pole-to-pole SATCOM-only control and will be able to operate in unsegregated airspace using the GA-ASI-developed Detect and Avoid system. MQ-9B includes the SkyGuardian and SeaGuardian® models, as well as the new Protector RG Mk1 that is currently being delivered to the United Kingdom’s Royal Air Force. The platform is building a global operator list, with procurement contracts signed with Belgium, Canada, Poland, the Japan Coast Guard, the Japan Maritime Self-Defense Force, Taiwan, India, and the U.S. Air Force in support of Special Operations Command. MQ-9B has also supported various U.S. Navy exercises.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

“GA-ASI and CAE have worked together to deliver leading-edge training to our customers for more than two decades,” said Jaime Walters, vice president of International Strategic Development at GA-ASI. “Through this partnership, we will continue to enhance operational readiness and effectiveness for MQ-9B operators worldwide, and in particular, we see the new SkyGuardian Mission Trainers supporting our new Canadian customer. CAE’s comprehensive training solutions ensure that personnel are well-prepared to operate these advanced RPAS efficiently and safely.”

GA-ASI’s partnership with CAE is part of its Team SkyGuardian Canada initiative, which is focused on GA-ASI’s collaboration and investment with Canadian businesses following the Government of Canada’s selection of the MQ-9B SkyGuardian.

“This agreement underscores our commitment to advancing the capabilities of RPAS training and ensuring that MQ-9B SkyGuardian operators worldwide have access to the best training tools available,” said Marc-Olivier Sabourin, Division President, CAE Defense & Security, International. “Our knowhow, expertise, and experience put our customers on the cutting edge of training and readiness. Through our long-term relationship with General Atomics, we are proud to be the key partner of choice for training solutions involving remotely piloted aircraft systems.”

CAE is a leading provider of flight training and services and works in partnership with the world’s most advanced OEMs and defense forces to deliver integrated training solutions that ensure operational excellence and mission readiness.

**13 . Date: 18-02-2025Fixed Wing - ISR / ISTAR - Small - Insitu Awarded $102,353,293 Modification to Previously-Awarded firm-fixed-price, IDIQ ContractURL: https://www.asdnews.com/news/defense/2025/02/18/insitu-awarded-102353293-modification-previouslyawarded-firmfixedprice-idiq-contract**

Insitu Inc., Bingen, Washington, is awarded a $102,353,293 modification (P00007) to a previously awarded firm-fixed-price, indefinite-delivery/indefinite-quantity contract (N0001922D0038).

This modification increases the contract ceiling to procure 21 RQ-21A Blackjack air vehicles and 47 ScanEagle air vehicles, as well as associated payloads, turrets, support equipment, spares, tools, and training for both Unmanned Aircraft Systems in support of intelligence, surveillance, and reconnaissance for the Navy, Foreign Military Sales customers, and other international business partnership capacity efforts.

Work will be performed in Bingen, Washington (88%); and various locations outside the continental U.S. (12%), and is expected to be completed in June 2026. No funds will be obligated at the time of award; funds will be obligated on individual orders as they are issued. This modification was not competed. Naval Air Systems Command, Patuxent River, Maryland, is the contracting activity.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

**14 . Date: 20-02-2025Hybrid Rotary / Fixed Wing - Armed ISR / ISTAR - Small - General - PlatformHavelsan's New UAV: BULUTURL: https://www.asdnews.com/news/defense/2025/02/20/havelsans-new-uav-bulut**

Entering the field of robotic autonomous systems in 2019, HAVELSAN has built a platform ecosystem that includes unmanned aerial, ground, and naval vehicles. The company has now introduced another unmanned aerial vehicle (UAV) for use by security forces.

Following the BAHA UAV, HAVELSAN has developed BULUT, a reconnaissance and surveillance UAV, in line with the project initiated under the leadership of the Presidency of Defense Industries (SSB) and the requirements it defined.

After undergoing development at HAVELSAN’s Robotic Autonomous Systems Center for some time, BULUT successfully met the tests and requirements set by the Acceptance Committee, which included representatives from users and the SSB. As a result, the UAV was added to the inventories of the Turkish Armed Forces and the General Directorate of Security.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

Equipped with an internal combustion engine, BULUT can stay airborne for six continuous hours and conduct reconnaissance and surveillance independently of GNSS.

Designed to operate under light rain and snowfall, the BULUT UAV system can function in various operational conditions thanks to its advanced sensors and software.

Currently in active use by security forces in operational areas, BULUT has a payload capacity of 5 kg and can share data over a range of up to 80 kilometers.

BULUT employs an electric motor system for vertical takeoff and landing, while its reconnaissance and surveillance operations are powered by a gasoline internal combustion engine, allowing it to remain airborne for up to six hours.

With advanced operational features such as moving object detection and avoidance, collision prevention, and anti-jamming capabilities, BULUT can be deployed for a wide range of missions, including border and coastal patrol, counter-smuggling and counter-terrorism operations, law enforcement and security tasks, narcotics detection, thermal imaging, wildfire response, post-disaster search and rescue, environmental pollution monitoring, agricultural applications, oil and gas pipeline security, energy infrastructure inspections, and search and rescue operations.

BULUT is fully autonomous and capable of taking off and landing without the need for a runway. It is also equipped with an EO/IR/LRF integrated camera system and features a handover capability, allowing mission control to be transferred between ground control stations—an essential feature for security forces.

Commenting on BULUT, HAVELSAN General Manager Dr. Mehmet Akif Nacar stated that they had developed a system that provides operational superiority in the field, fully aligned with the expectations of the Presidency of Defense Industries. He emphasized, “The SSB and our security forces played a significant role in the development of our new UAV, BULUT. The primary reason why BULUT quickly entered inventory and is now actively used in the field is our team's rapid response to these expectations. I congratulate everyone involved in the project.”

HAVELSAN Deputy General Manager for Simulation, Autonomous, and Platform Management Technologies, Muhittin Solmaz, noted that BAHA was the company’s first UAV experience, and after three years of development, BULUT has further strengthened security forces. “BULUT, built upon the field experience of BAHA, will be a game-changer in its category. We wholeheartedly believe in this,” he said.

HAVELSAN Product Development and ELD Director Veysel Ataoglu highlighted that BULUT is actively used in operational areas and that the team continuously improves the product based on field feedback. He added, “Following BARKAN and BAHA, BULUT has successfully completed various acceptance processes by the SSB and security forces, officially joining the inventory. We are also working on different versions of BULUT.”

**15 . Date: 25-02-2025M-Rotary - ISR / ISTAR - Mini - Partnership - Volatus and Ondas Forge Strategic Partnership to Elevate Border Surveillance with Advanced Drone TechnologiesURL: https://www.asdnews.com/news/defense/2025/02/25/volatus-ondas-forge-strategic-partnership-elevate-border-surveillance-with-advanced-drone-technologies**

Volatus Aerospace Inc. (TSXV: FLT) (OTCQX: TAKOF) (Frankfurt: A2JEQU) ("Volatus" or "the Company") and Boston-based Ondas Holdings Inc. (Nasdaq: ONDS) announced today a strategic partnership through Ondas' subsidiary, American Robotics, Inc. (“American Robotics”). Through this partnership, Volatus Aerospace will market and support American Robotics’ Optimus System – a state-of-the-art, fully autonomous drone platform designed to provide persistent, 24/7 aerial security and intelligence. The Optimus System significantly enhances Volatus Aerospace's capabilities in providing integrated, full-scope Border Surveillance and Security Solutions that are essential to national security.

This partnership will:

"This strategic alliance empowers Volatus to significantly enhance our border surveillance and security solutions,” said Glen Lynch, CEO of Volatus Aerospace. “By integrating the scalable, field-proven Optimus System with our remote operations, we are ready to meet evolving security and surveillance needs. The growing demand for autonomous border security solutions highlights the importance of this partnership.”

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

Focused on addressing the increasing demand for advanced border surveillance, this collaboration leverages Volatus’ sophisticated Operations Control Center (OCC) to maximize the potential of the Optimus System for both standalone and integrated, border security solutions across North America and other global markets. By integrating both air and ground security intelligence, this approach significantly enhances the ability to detect and mitigate threats before they escalate.

"We are delighted to partner with Volatus, who consistently distinguish themselves as providers of highly sophisticated aerial intelligence and services to critical governmental, industrial and infrastructure markets,” Eric Brock, CEO of Ondas Holdings. “We believe this collaboration, supported by Volatus’ extensive sales, marketing and field support and services capabilities, will extend our market reach and accelerate market penetration for our Optimus System. We are particularly excited about Volatus’ pursuit of programs to secure borders, where the deployment of autonomous drone infrastructure is an urgent need for many homeland security entities today."

The Optimus System is designed for persistent aerial operations in the most challenging environments with proven autonomy and reliability allowing for scalable remote operations. Optimus automated battery and payload swapping capabilities enable uninterrupted availability and support multiple critical applications ranging from video surveillance to inspection and analysis utilizing a variety of integrated sensors including LIDAR. This partnership is set to transform the landscape of border surveillance, security, and critical infrastructure monitoring, integrating advanced aerial technologies including piloted and remotely piloted aircraft, along with ground-based sensor systems. This integrated package of aerial security capability, including the NDAA-compliant Optimus System is positioned to address the expansive 8,890 kilometer US – Canada border to revolutionize border security operations.

Highlights of the Strategic Partnership:

In the current international environment, the need for sovereign countries to protect and secure their borders has become increasingly critical. Challenges such as illegal immigration, drug trafficking, and weapons smuggling pose significant threats to national security and public safety. As these issues continue to escalate, there is a growing demand for advanced surveillance and security solutions that can provide comprehensive monitoring and rapid response capabilities. The strategic partnership between Ondas and Volatus Aerospace, leveraging the state-of-the-art Optimus System amongst a diverse fleet, addresses these pressing concerns by offering a robust, autonomous aerial platform designed to enhance border protection and ensure the integrity of national boundaries. Furthermore, the integration of emergency response capabilities within the Optimus System allows for a more effective response to identified threats. By providing real-time data and situational awareness, the system enhances the ability to mitigate risks swiftly and efficiently, ensuring a proactive approach to national security challenges.

**16 . Date: 26-02-2025Partnership - Hensoldt and QinetiQ Germany Expand Their CooperationURL: https://www.asdnews.com/news/defense/2025/02/26/hensoldt-qinetiq-germany-expand-their-cooperation**

The sensor solutions provider HENSOLDT and QinetiQ Germany have strengthened their collaboration in the field of uncrewed aerial vehicles and systems, with ESG Elektroniksystem- und Logistik-GmbH serving as the prime contractor.

This strengthened alliance supports QinetiQ's Global Threat Representation strategy, reinforcing its reputation as a global service provider for military exercises, from operational analysis to implementing new capabilities.

The expanded partnership focuses on three key areas including:

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

This partnership builds on years of successful cooperation between, QinetiQ and HENSOLDT in Germany and Europe particularly in airborne radar systems using PC-12 test aircraft and the supply of reconnaissance technology for QinetiQ's fleet.

With key locations in Bavaria and Schleswig-Holstein, QinetiQ and HENSOLDT are well-positioned to support the German Armed Forces and other security authorities in operating uncrewed systems.

HENSOLDT has been integrated as a certified body by the German Armed Forces Aviation Office for military uncrewed aerial vehicles of category IIa. This category encompasses drones used for flight target presentation, prototypes and system demonstrators.

HENSOLDT will also act as a recognised training and certified testing centre for remote pilots of civil uncrewed aircraft in QinetiQ's category 2c, which includes drones that do not require prior approval. As a multi-certified body, HENSOLDT can provide comprehensive system support within this strengthened partnership.

Thorsten Heil, Head of Flight Operations at HENSOLDT in Germany, added: "As a reliable technology and innovation partner and an approved aviation company for both uncrewed and crewed aircraft, we are committed to developing specific, customer-oriented, and market-driven solutions that maintain our armed forces' defence capabilities and enhance public safety. The intensified cooperation with QinetiQ is a critical step towards improving education and training for uncrewed aircraft and systems in Germany, contributing to the sustainable strengthening of our security."

Matthias Grögor, Head of Strategic Business Development at QinetiQ in Germany, said: "Through our partnership with HENSOLDT, we demonstrate a proven collaboration with the German Armed Forces and other security authorities, backed by years of successful work, particularly with the German Air Force,” Matthias said.

“Together, we aim to expand our services in uncrewed systems - from development and certification to education and training, around our Bavarian location in Augsburg, helping to establish Bavaria as a leading hub for drone technology."

**17 . Date: 06-03-2025Fixed Wing - Target Drone - Tactical - Contract - Naval Air Systems Command Awards Kratos Additional $59.3M for BQM-177A Subsonic Aerial Target Systems; Total Contract Value Exceeds $175MURL: https://www.asdnews.com/news/defense/2025/03/06/naval-air-systems-command-awards-kratos-additional-593m-bqm177a-subsonic-aerial-target-systems-total-contract-value-exceeds-175m**

Kratos Defense & Security Solutions, Inc. (NASDAQ: KTOS), a Technology Company in the Defense, National Security and Global Markets, and industry-leading provider of high-performance, jet-powered unmanned aerial systems, announced today that Kratos has received $59,338,010 for an additional 70 BQM-177A Subsonic Aerial Target (SSAT) aircraft through the exercise of the contract option for Full Rate Production (FRP) Lot 6. When combined with the base award and exercise of FRP Lot 5, the resulting overall value of FRP Lots 4 through 6 totals $177,702,962. Total contract value if the remaining option for Lot 7 is exercised at the maximum production quantity will be $227,647,890.

Steve Fendley, President of Kratos Unmanned Systems Division, said, “Since the first Full Rate Production contract award in October 2020, the world has undergone impactful economic and political shifts creating significant production challenges across our industry and increased need for development, test, and training associated with our country’s current and upcoming weapons systems. On behalf of all the dedicated men and women at Kratos, we will collectively continue to do our utmost to support our warfighters with this high-fidelity threat surrogate.”

The majority of the work under this contract will be conducted in Kratos facilities in Sacramento, CA, and Fort Walton Beach, FL.

Market forecasts by Region, Operation Mode, and Platform Type. Country Analysis, Market and Technology Overview, Opportunities and Scenario Analysis, and Leading Company Profiles

**18 . Date: 06-03-2025H-Rotary - Cargo - Tactical - General - Schiebel Camcopter S-100 UAS Selected by EDA for Cross-domain Logistics ProgrammeURL: https://www.asdnews.com/news/defense/2025/03/06/schiebel-camcopter-s100-uas-selected-eda-crossdomain-logistics-programme**

Under the Hub for European Defence Innovation (HEDI), EDA has established the “Autonomous Systems for Cross-Domain Logistics (Air and Land)” programme and selected Schiebel’s CAMCOPTER® S-100 for the heavy-lift Vertical Takeoff and Landing (VTOL) Unmanned Air System category.

The large-scale initative, hosted by the Italian Army, will focus on collaborative experimentation of UAS and Unmanned Ground Systems (UGS). In June and July 2025, several simulated missions, e.g. last-mile resupply in hostile environments, will be demonstrated. The CAMCOPTER® S-100 was selected for the above 50kg payload category, and will conduct the trials together with two smaller UAS and three UGS.

The role of autonomous systems in today’s military is increasingly requiring interoperability, particularly for cross-domain operations and logistical support, significantly enhancing efficiency and effectiveness in challenging environments.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

HEDI aims at accelerating and streamlining the integration of emerging technologies into military applications through immersive operational and technical field testing in a collaborative and agile environment.

“This programme, which is the first of its kind by EDA, closely follows three other tenders won by Schiebel in the European Union, including a new contract for the European Maritime Safety Agency, as well as the European Defence Fund’s SEACURE and OPTIMAS consortiums. With its unrivalled experience, maturity and proven performance, the S-100 is the logical choice and we’re looking forward to showcase our capabilities at the upcoming experimentation,” said Hans Georg Schiebel, Chairman of the Schiebel Group.

**19 . Date: 10-03-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - PayloadMarine Corps MQ-9 Reapers Enhanced With Advanced Payload UpgradeURL: https://www.asdnews.com/news/defense/2025/03/10/marine-corps-mq9-reapers-enhanced-with-advanced-payload-upgrade**

The Navy’s MQ-9 Reaper test squadron at Pax River received the first SkyTower II (STII) pod in preparation for the system’s initial operational capability (IOC) next year.

Air Test and Evaluation (UX) 24 loaded the new pod onto the aircraft Feb. 25, conducting initial power on checks, the first step into integrating the new capability into the aircraft platform.

“The program is excited to deliver SkyTower II for testing, marking a major milestone in our development journey,” said Capt. Dennis Monagle, Multi-Mission Tactical UAS program manager. “Over the past two years, we’ve partnered with GALT, a small business prime vendor, to rapidly develop this unique capability using middle-tier acquisition, accelerating innovation for the warfighter. With robust system and integration testing now underway, we remain on track to achieve initial operating capability this year, delivering critical capability to the U.S. Marine Corps and the joint forces.”

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

STII is an airborne network extension pod that enhances cross-domain communication capabilities and links communications between disparate forces. It is required to execute the Intelligence, Surveillance, and Reconnaissance (ISR) concept of operations by providing tactically relevant operational communications and data sharing capabilities with many forces in support of the MQ-9 Reapers’ operational mission.

UX-24 also completed a fit check of the MQ-9 in the large anechoic chamber at Pax River in late February. The team conducted a number of tests and hoisted the aircraft for the first time as a risk reduction for upcoming program efforts. The tests proved the ability to safely hang the aircraft while providing power, cooling and satellite link with the aircraft for communications, command and control.

Over the next several months, UX-24 will conduct final test events before delivering the upgraded MQ-9s to the fleet.

“The team has been able to accomplish a lot of work in a very compressed timeline by developing and executing these test plans for the chamber event and STII testing," said Cmdr. Lauren Lawson, MQ-9 government flight test director. "The dedication shown and technical challenges they’ve overcome to conduct this critical testing to help develop the best product possible to support the Marines is truly commendable."

VMU-3 is currently flying MQ-9’s in theater today and will be the first to deploy with this new system in 2026.

The MQ-9 Reaper provides Marines with a long-range ISR capability in support of maritime domain awareness and expeditionary advanced based operations in contested environments.

**20 . Date: 12-03-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - DatalinkGA-ASI's Gray Eagle ER Makes 1st PLEO FlightsURL: https://www.asdnews.com/news/defense/2025/03/12/gaasis-gray-eagle-er-makes-1st-pleo-flights**

General Atomics Aeronautical Systems, Inc. (GA-ASI) conducted its first flight test series of the Gray Eagle Extended Range (GE-ER) Unmanned Aircraft System (UAS) using a Proliferated Low Earth Orbit (PLEO) satellite constellation for aircraft communications. Contracted by the U.S. Army, the flight tests began in January 2025 and mark a significant milestone, making GE-ER the first U.S. Army aircraft to be controlled over the new satellite service. Gray Eagle is also the only U.S. Army UAS capable of leveraging Geostationary Earth Orbit (GEO), Low Earth Orbit (LEO) and PLEO constellations for secure, inflight adaptable and resilient communication, navigation and data management.

The initial testing focused on flight-critical operations, including core aircraft control functions as well as sensor and communications systems. To date, GA-ASI has conducted two GE-ER flights and a series of ground test events using PLEO. Future flight testing is in the planning stages and includes operations across the full flight regime.

The Gray Eagle family of UAS is built on a Modular Open Systems Approach (MOSA) design that includes standardized interfaces and protocols. This approach has enabled rapid integration of the PLEO constellation and other significant capabilities without major technical efforts or extended timelines for integration and testing so new capabilities can be fielded faster.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

“The PLEO integration and flight testing continue to show that the current GE-ER open architecture is real. We are practicing rapid integration now which will prove critical to the platform’s survivability and mission success in Multi-Domain Operations,” said GA-ASI Vice President of Army Programs Don Cattell.

Building on the GE-ER, the Gray Eagle 25M (GE 25M), takes MOSA to the next level with a government-owned, government-controlled open architecture that enables plug-and-play capabilities to ensure the platform’s rapid, low-cost adaptability to changing threats. GE 25M incorporates open architecture with ground systems, advanced and modular datalinks, and an upgraded propulsion system. These powerful additions significantly enhance the platform’s ability to rapidly add new capabilities, provide resilience to electronic threats, and deliver expeditionary employment to austere locations. PLEO will be a baseline capability for the 25M system.

The PLEO capability for the GE 25M is just one of several features of the system that maximizes the survivability of the platform. It also provides a low-cost opportunity to drastically increase the operational flexibility of both the Gray Eagle ER and Gray Eagle 25M. The 25M’s MOSA architecture enables use of the higher data rates available on the PLEO system and supports flight operations across the globe from pole to pole. These capabilities, combined with longer-range sensors, anti-jam navigation, and expeditionary ground control systems allow the Gray Eagles to operate outside the threat weapons envelope, but deliver effects hundreds of kilometers beyond the Forward Line of Own Troops, making GE 25M the most survivable aircraft in the Army inventory.

**21 . Date: 14-03-2025Partnership - Overwatch and Milrem Robotics Announce Strategic Collaboration to Advance Unmanned Defence CapabilitiesURL: https://www.asdnews.com/news/defense/2025/03/14/overwatch-milrem-robotics-announce-strategic-collaboration-advance-unmanned-defence-capabilities**

Overwatch, a British aerospace and defence business specialising in the design and manufacture of unmanned aerial vehicles (UAVs), and Milrem Robotics, the world’s leading robotics and autonomous systems developer, have signed a collaboration agreement to drive product development, production, and sales of cutting-edge unmanned defence solutions worldwide.

Under this collaboration, Overwatch and Milrem Robotics will undertake joint research and development assessments to explore possibilities for integrating capabilities, payloads, and effects between Overwatch’s UAVs and Milrem Robotics’ unmanned ground vehicles (UGVs), with the aim of developing highly interoperable unmanned systems.

Both parties will engage in collaborative test and evaluation efforts to advance operational capabilities and deliver enhanced performance under realistic mission conditions.

Market forecasts by Region, User, Application, Platform, Size, and Power Source. Country Analysis, Market and Technology Overview, Opportunities and Scenario Analysis, and Leading Company Profiles

“Overwatch is thrilled to embark on this strategic collaboration with Milrem Robotics,” said Drew Michael, CEO at Overwatch. “By leveraging our respective strengths in UAV and UGV technologies, we aim to deliver unparalleled unmanned defence capabilities to meet the evolving needs of our customers worldwide.”

“We look forward to working closely with Overwatch to expand our product portfolios and address emerging market demands,” said Kuldar Väärsi, CEO of Milrem Robotics. “By combining our expertise and jointly exploring R&D and testing, we expect to develop integrated solutions that will significantly enhance operational effectiveness and mission success for our clients,” he added.

The companies will also coordinate marketing activities to promote each other’s products beyond their domestic markets, opening up new business opportunities across global defence sectors.

**22 . Date: 20-03-2025Regulation - GA-ASI Achieves EMAR/FR 145 Maintenance Organization Approval for MQ-9A and MQ-9B PlatformsURL: https://www.asdnews.com/news/defense/2025/03/20/gaasi-achieves-emarfr-145-maintenance-organization-approval-mq9a-mq9b-platforms**

General Atomics Aeronautical Systems, Inc. (GA-ASI), a world leader in unmanned aircraft systems (UAS), has received the prestigious EMAR/FR 145 Maintenance Organization Approval for component maintenance from the French Military Continuing Airworthiness Authority, DSAE. This approval underscores GA-ASI’s commitment to the highest standards of safety, compliance, and operational excellence in military aviation.

The EMAR framework is a set of regulations developed from commercial aerospace standards (FAA/EASA) that are designed to ensure airworthiness for European military aircraft. It establishes a common airworthiness framework recognized by military airworthiness authorities worldwide. EMAR/FR 145 certification authorizes maintenance organizations to perform critical maintenance tasks while ensuring strict adherence to safety, reliability, and documentation requirements.

GA-ASI’s EMAR/FR 145 approval allows the company to issue EMAR Form 1s (Return to Service forms) for components serviced by the approved maintenance organization, confirming the safety and airworthiness of the equipment. This recognition applies to GA-ASI’s maintenance activities at its Poway and Adelanto, California, facilities and covers CAT C (component maintenance) services.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

“This approval is a significant achievement for GA-ASI, positioning the company to better serve international customers, especially military users of our MQ-9A and MQ-9B UAS platforms,” said Sam Richardson, GA-ASI vice president of Sustainment. “The ability to leverage the EMAR/FR 145 certification streamlines the company’s processes, reduces costs, and accelerates future airworthiness pursuits, as many future customers will recognize this certification rather than requiring a full, independent certification process.”

By obtaining EMAR/FR 145 approval, GA-ASI further demonstrates its ability to meet the stringent demands of the global defense market. The framework’s widespread recognition ensures that GA-ASI can expand operations and offer high-quality, compliant maintenance services to international customers, ultimately driving company growth in global markets.

This certification offers significant operational and financial benefits for both GA-ASI and its customers. For GA-ASI, the approval reduces future oversight costs by leveraging the DSAE Audit Team’s oversight activities, ensuring a more efficient and cost-effective certification process for future non-French EMAR customers. For customers, the EMAR/FR 145 approval provides a framework recognized internationally, offering a streamlined maintenance certification process. The recognition agreements between EMAR and non-EMAR countries allow future customers to leverage GA-ASI’s French approval, saving time and resources compared to a full certification effort.

**23 . Date: 25-03-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - GA-ASI Completes 1st Flight of Belgium's MQ-9B SkyGuardianURL: https://www.asdnews.com/news/defense/2025/03/25/gaasi-completes-1st-flight-belgiums-mq9b-skyguardian**

General Atomics Aeronautical Systems, Inc. (GA-ASI) and the Belgian Ministry of Defence completed the first flight of a new MQ-9B SkyGuardian® Remotely Piloted Aircraft (RPA) that will be the first SkyGuardian delivered to Belgium as part of a four-aircraft purchase. The flight was based out of GA-ASI’s Desert Horizon Flight Operations Facility in El Mirage, California and took place on February 20, 2025.

First flight is part of a series of ground and flight tests conducted to validate the performance of the Belgian MQ-9B RPA. The objective of the flight was to prove controllability and safe landing of the aircraft. The flight was successful, and the program will move forward with further development flight tests.

“We’re excited to complete the first flight of SkyGuardian for Belgium,” said Chris Dusseault, vice president of MQ-9B in Europe. “Belgium joins the U.K.’s Royal Air Force and will become the second country to take delivery of our MQ-9B in Europe.”

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

MQ-9B is the world’s most advanced RPAS, delivering exceptionally long endurance and range—with auto takeoff and landing under pole-to-pole SATCOM-only control—and will be able to operate in unsegregated airspace using the GA-ASI-developed Detect and Avoid system. MQ-9B includes the SkyGuardian and SeaGuardian® models, with multiple deliveries made to the U.K.’s Royal Air Force (Protector), as well as orders from Canada, Poland, the Japan Coast Guard, the Japan Maritime Self-Defense Force, Taiwan, India, and the U.S. Air Force in support of the Special Operations Command. MQ-9B has also supported various U.S. Navy exercises, including Northern Edge, Integrated Battle Problem, and Group Sail.

The Foreign Military Sale (FMS) to Belgium also includes two Certifiable Ground Control Stations (CGCS).

**24 . Date: 27-03-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - General - TEKEVER AR3 Surpassed 10,000 Operational Flight Hours in UkraineURL: https://www.asdnews.com/news/defense/2025/03/27/tekever-ar3-surpassed-10000-operational-flight-hours-ukraine**

TEKEVER has announced that its AR3 drone platform has successfully completed over 10,000 operational flight hours in Ukraine, supporting critical intelligence, surveillance, and reconnaissance (ISR) missions in real-world combat scenarios.

The milestone underscores the AR3’s combat-proven reliability, versatility, and technical maturity, following extensive deployment in one of the most demanding operational environments in the world today. Designed and manufactured in Europe, the AR3 has undergone more than 100 design iterations, shaped by constant feedback from front-line operations and real-time mission requirements.

“The AR3 has demonstrated its value in the most extreme conditions imaginable,” said Ricardo Mendes, CEO of TEKEVER. “Surpassing 10,000 flight hours in Ukraine is not just a number — it’s proof of the trust that armed forces place in our technology to deliver real-time intelligence when lives are on the line. We’re proud to be part of a mission that contributes to greater situational awareness, operational efficiency, and ultimately, the protection of lives.”

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

“At TEKEVER, we believe that innovation must be driven by real operational needs. Every flight, every mission, every lesson learned from Ukraine has been fed directly into the evolution of our platform,” Mendes added.

The AR3 is a tactical UAS designed for both land and maritime ISR operations. With its extended endurance, modular payload architecture, and fully autonomous operation capabilities, it has become a key tool for defence and security forces across Europe and beyond.

Looking ahead, TEKEVER continues to invest in advancing the AR3 and its broader range of UAS solutions, integrating AI-powered analytics, swarming capabilities, and secure communications to support the future of multi-domain operations.

**25 . Date: 28-03-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - Partnership - Airbus Partners With Drone Forge to Advance Flexrotor in Asia PacificURL: https://www.asdnews.com/news/defense/2025/03/28/airbus-partners-with-drone-forge-advance-flexrotor-asia-pacific**

Australian aerospace start-up Drone Forge and Airbus have signed a Letter of Intent (LOI) to collaborate on the deployment and operational integration of the Flexrotor uncrewed aerial system.

This agreement, which includes the acquisition of Flexrotor systems, marks a critical step towards transforming uncrewed aviation with game-changing solutions and technologies tailored for tactical operations.

“This partnership between Airbus and Drone Forge is a giant leap forward in the evolution and progress of the UAV industry. When we deliver a capability or product to a customer, they expect a proven solution, partnerships committed to safety, and teams that can provide world class support. This partnership will provide customers with all of these and more,” said Thomas Symes, Chief Executive Officer of Drone Forge.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

Symes added: “The Asia-Pacific region presents a significant opportunity for a UAV solution like the Flexrotor. Built on Drone Forge’s values of trust and performance, this partnership with Airbus aims to fully commercialise the Flexrotor across commercial, government, and defence sectors.”

“This agreement outlines a shared commitment to explore opportunities for implementing innovative Flexrotor technologies in the region. Designed as a force multiplier for diverse missions in defence and security applications, this partnership signals strong confidence in our Flexrotor capabilities and offers perfect crewed-uncrewed teaming possibilities for aircraft operators,” said William Sampson, Head of Market Operations of Airbus Helicopters.

As part of Drone Forge’s portfolio expansion, the company has established a UAS service centre in Perth, Western Australia, to provide training, maintenance and support services for a range of UAS including the Flexrotor.

The Flexrotor, is Airbus’ newest addition to its UAS portfolio. A modern Vertical Takeoff and Landing (VTOL) uncrewed aircraft with a maximum launch weight of 25 kg (55 lbs), it has been designed for ISTAR missions for more than 12-14 hours in a typical operational configuration. It can integrate different types of payloads including an electro-optical system and advanced sensors to suit customers’ unique mission needs. With the ability to autonomously launch and recover from either land or sea requiring only a 3.7 by 3.7 m (12 by 12 ft.) area, the Flexrotor is ideal for expeditionary missions requiring minimal footprint. Through the support of the US Department of Defence (DoD), and contracted deployment in a variety of maritime security exercises, the Flexrotor is a mission-proven, force multiplier for operations in harsh, high-threat, GPS-denied environments.

The Flexrotor is also being operated for parapublic missions such as forest fire surveillance (providing firefighters with critical images day or night) and can address other demanding mission needs, including ice navigation (helping guide naval vessels through ice in the Arctic ocean), law enforcement, and border patrol.

**26 . Date: 31-03-2025Hybrid Rotary / Fixed Wing - Armed ISR / ISTAR - Small - General - PlatformMayman Aerospace RAZOR VTOL Achieves Historic Milestone with Fully Autonomous Inaugural FlightURL: https://www.asdnews.com/news/defense/2025/03/31/mayman-aerospace-razor-vtol-achieves-historic-milestone-with-fully-autonomous-inaugural-flight**

In a great advance for Vertical Takeoff and Landing (VTOL) Unmanned Aerial Systems (UAS), Mayman Aerospace today announced the successful completion of test flights for the RAZOR P100, which will be the first commercial aircraft in the company's family of autonomous UAS. The achievement marks a major milestone not only for RAZOR but for the company's strategic vision and market position.

The test program, conducted at the US Marine Corps Air Ground Combat Center located at Twentynine Palms, CA validated 18 months of meticulous engineering and development efforts. Most notably, the tests included the successful inaugural un-tethered flights of the RAZOR 100, which operated with complete autonomy while executing complex flight maneuvers that demonstrated the sophisticated capabilities of RAZOR's proprietary flight control software called SKYFIELD™.

SKYFIELD, the company's advanced AI-driven autonomous flight control system, will enable numerous RAZOR aircraft to navigate complex environments without human intervention, making critical adjustments in real-time based on operational conditions. This autonomous AI-driven decision-making capability will also allow the platform to adapt to changing mission parameters and environmental factors with precision and reliability.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

"These flights represent the culmination of extraordinary engineering expertise and relentless dedication from our team," said David Mayman, Founder & CEO at Mayman Aerospace. "What we've accomplished positions us at the vanguard of autonomous VTOL flight technology. There is simply nothing comparable to the RAZOR family of aircraft available in today's market, and these successful tests validate our innovative approach to solving complex challenges in this domain."

In addition to the P100's series of tests, the program featured the first extended range flight of the RAZOR TBX, while successfully carrying a payload of 50 pounds. This fully autonomous beyond-visual-line-of-sight (BVLOS) operation marked the 26th flight for the TBX platform, which continues to serve as both a reliable workhorse and an invaluable testbed for ongoing research and development initiatives.

"I couldn't be more proud of the team's accomplishments," remarked company Chief of Staff, Daniel Fox. "The warfighter has been waiting for a solution that combines the versatility, autonomy, and reliability that RAZOR delivers. The success of these test flights demonstrates not only our technical capabilities but also our understanding of what operators truly need in the field."

"From an engineering perspective, what we've achieved in just 18 months is extraordinary," explained Dr. Manu Sharma, the company's Chief Engineer. "Our team has overcome significant technical challenges to develop flight control systems that enable unprecedented levels of autonomy and precision. The speed of our progress speaks to both the talent of our engineers and the effectiveness of our approach towards development. These achievements are setting the foundation for SKYFIELD, which will push the boundaries even further."

SKYFIELD will transform onboard single-aircraft control into an autonomous AI-driven mission management system. It will enable seamless swarming, integrated with Battle Management Systems (BMS) offering commanders a unified airborne capability. Deploying a robust and secure zero-trust mesh architecture, SKYFIELD will enable flawless operation in GPS denied and heavily contested Electronic Warfare (EW) environments.

Looking ahead to the remainder of 2025, Mayman Aerospace will focus on expanding the operational envelope of both the P100 and TBX platforms, with particular emphasis on enhancing payload capabilities, extending flight range, and refining the SKYFIELD autonomous decision-making algorithms that set RAZOR apart from conventional UAS systems.

**27 . Date: 01-04-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - General - PlatformShield AI's V-BAT Successfully Demos Resilience to EW at Project Convergence Capstone 5URL: https://www.asdnews.com/news/defense/2025/04/01/shield-ais-vbat-successfully-demos-resilience-ew-at-project-convergence-capstone-5**

**28 . Date: 07-04-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - PayloadGA-ASI Expands Targeting Capability for MQ-9B SeaGuardianURL: https://www.asdnews.com/news/defense/2025/04/07/gaasi-expands-targeting-capability-mq9b-seaguardian**

**29 . Date: 23-04-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - Marines Surpass 1,000 MQ-9A Flight Hours As Capabilities ExpandURL: https://www.asdnews.com/news/defense/2025/04/23/marines-surpass-1000-mq9a-flight-hours-as-capabilities-expand**

General Atomics Aeronautical Systems, Inc. is proud to announce that the U.S. Marine Corps has passed more than 1,000 flight hours with MQ-9A unmanned aircraft in support of service-level training exercises and weapons and tactics instructor courses. This accomplishment involved a combined aircrew of dedicated Marines and GA-ASI personnel, highlighting the seamless integration and operational effectiveness of the MQ-9A platform within the Marine Air-Ground Task Force (MAGTF) and the MAGTF Unmanned Expeditionary (MUX) Program.

These demanding exercises showcased the advanced capabilities of the MQ-9A by integrating cutting-edge technologies such as the SkyTower networking support pod, Automatic Identification System, latest-generation Lynx® multi-mode radar and various other tactical networks and capabilities. The joint teams successfully conducted satellite launch and recovery activities operating out of a strategic expeditionary landing field near Marine Corps Air Ground Combat Center Twentynine Palms, Calif., further demonstrating the platform’s precision targeting and reconnaissance abilities in realistic training scenarios.

Previously, an uncrewed aircraft required a crew positioned at the airfield where it was operating to fly it for takeoff via direct line-of-site radio link. Then a mission crew could take over the aircraft from anywhere via satellite. Today, satellite launch and recovery means the main Marine mission crew, which can be sited anywhere, flies the aircraft from takeoff via the satellite link. This capability, validated in the Marine Corps operations, enables huge flexibility and expands the locations from which units can operate.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

A key element of these exercises also included not only live-fire training but also comprehensive mission planning, networked communications, and multi-domain coordination. These events provided invaluable experience in integrating the MQ-9A into complex, distributed combat scenarios across the full range of Marine Air-Ground Task Force operations. From supporting maneuver elements with real-time intelligence, surveillance and reconnaissance to validating command and control networks, the MQ-9A consistently demonstrated its adaptability and operational value. This milestone underscores the platform’s critical role in enhancing situational awareness, mission execution, and overall effectiveness across the battlespace.

“Reaching 1,000 flight hours for these rigorous training exercises alongside our Marine Corps and Air Force partners is a testament to the reliability and adaptability of the MQ-9A platform,” said GA-ASI President David R. Alexander. “This achievement highlights the power of collaboration and the critical role the MQ-9A can play in supporting the MAGTF’s mission readiness.”

The successful integration of the MQ-9A platform across recent operations represents a major milestone in aligning capability with the MAGTF construct. These events showcased the MQ-9A’s ability to support distributed operations, extend sensor coverage, and provide persistent intelligence, surveillance and reconnaissance in support of dynamic mission sets. The coordinated efforts of Marines and GA-ASI personnel underscored the platform’s high degree of interoperability and its growing role in enabling expeditionary operations in contested environments.

To date, GA-ASI has delivered 17 MQ-9A UAS to USMC. The USMC awaits delivery of three additional aircraft by the end of this year.

**30 . Date: 25-04-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - General - BAHA UAV Officially Inducted into Turkish Land Forces InventoryURL: https://www.asdnews.com/news/defense/2025/04/25/baha-uav-officially-inducted-into-turkish-land-forces-inventory**

The Turkish Ministry of National Defense has announced that the Sub-Cloud Unmanned Aerial Vehicle (UAV) BAHA, which was procured in various quantities by the Land Forces Command, has successfully completed its inspection and acceptance procedures and has officially entered into the inventory of the Turkish Armed Forces.

Developed by HAVELSAN and inducted into the Turkish Armed Forces' inventory in 2024, BAHA marks a significant milestone through the journey of Digital Troops which was conceptualised first in 2021. Following the earlier induction of BARKAN, the first unmanned ground vehicle (UGV) of the Digital Troops, BAHA’s integration further strengthens the Turkish military’s modernization efforts.

Anticipating the requirements of future operational environments, HAVELSAN has begun to deploy its unmanned systems domestically and internationally. BAHA, an important element of this vision, achieved export successes in Africa, Central Asia, and the MENA region in 2023 and 2024 and has now been made available for use by national security forces.

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

Demonstrating its versatility beyond military operations, BAHA was also deployed during a disaster and earthquake drill coordinated by AFAD (Disaster and Emergency Management Authority) for rubble reconnaissance and surveillance missions.

Speaking at the Ministry of National Defense Weekly Press Briefing, Rear Admiral Zeki Aktürk emphasized the growing capabilities of the Turkish Armed Forces through indigenous defense industry products, stating,

"With our domestically developed defense industry products, which aim to enhance our national and international power and influence, the capabilities of the Turkish Armed Forces continue to grow day by day. In this context, inspection and acceptance procedures for the Sub-Cloud Unmanned Aerial Vehicle (BAHA) procured by the Land Forces Command have been completed, and the systems have been inducted into our inventory."

General Specifications of BAHA:

Key Features of BAHA:

Developed with superior engineering solutions to meet the demands of modern armies, BAHA continues to enhance the operational capabilities of the Turkish Armed Forces and stands as a symbol of HAVELSAN’s commitment to technological excellence.

**31 . Date: 30-04-2025H-Rotary - Cargo - MALE - Partnership - SoftwareAirbus US Space & Defense, Shield AI Partner to Integrate Autonomy on Unmanned Aerial Logistics ConnectorURL: https://www.asdnews.com/news/defense/2025/04/30/airbus-us-space-defense-shield-ai-partner-integrate-autonomy-unmanned-aerial-logistics-connector**

Airbus U.S. Space & Defense and Shield AI announced a teaming agreement to integrate Shield AI’s Hivemind autonomy software on the Airbus MQ-72C Logistics Connector, an unmanned variant of the UH-72 Lakota. The collaboration will expand the platform’s mission capabilities through autonomy-enabled operations across a wide range of logistics and operational scenarios—including those under the U.S. Marine Corps’ Aerial Logistics Connector (ALC) program.

Under the agreement, Airbus U.S. Space & Defense and Shield AI will test Hivemind autonomy in collaboration with Airbus’ Helionix, advancing the future autonomous mission capabilities of the Marine Corps. The level of autonomy will be scaled during future test activities and demonstrations, ultimately leading to unmanned operations in contested logistics environments.

“The Lakota is a proven multi-mission platform that is ready to support unmanned operations in austere environments,” said Robert Geckle, Chairman and CEO of Airbus U.S. Space & Defense. “Pairing our aircraft with next-generation autonomy software opens new mission possibilities for the warfighter and allied forces worldwide.”

Market forecasts by Region, Class, Type, and End-User. Country Analysis, Market and Technology Overview. Opportunities Analysis, and Leading Company Profiles

The effort will continue to evolve missionization over the next several years, ultimately enabling more advanced levels of autonomous flight across the Marine Corps and broader Joint Force.

“Airbus is a world-class partner with a strong track record of delivering reliable systems for the warfighter,” said Ryan Tseng, CEO of Shield AI. “The Lakota has been a mainstay of military aviation for years—a widely-fielded, trusted platform used across a range of missions. Integrating Hivemind onto this aircraft shows how autonomy can rapidly enhance proven systems to meet the demands of today’s missions, and it’s a key step toward fully autonomous, uncrewed logistics operations that are scalable, resilient, and built for the future fight.”

The Airbus U.S. team is entering the second year of the Aerial Logistics Connector Middle Tier of Acquisition (MTA) Rapid Prototyping Program, which aims to provide the service with aircraft prototypes to demonstrate capabilities to the warfighter through a series of operational demonstrations and experiments.

The Aerial Logistics Connector effort is one of several efforts across the Department of Defense to deliver logistical support in distributed environments during peer or near- peer conflicts.

**125 . Date: 15-04-2024N/A - N/A - Partnership - PlatformAV ENTERS TEAMING AGREEMENT WITH PARRY LABS TO DEVELOP MODULAR NEXT-GENERATION LONG RANGE RECONNAISSANCE UASURL: https://www.avinc.com/resources/press-releases/view/av-enters-teaming-agreement-with-parry-labs-to-develop-modular-next-generation-long-range-reconnaissance-uas**

ARLINGTON, Va., April 15, 2024 – AeroVironment (AV) has entered into an exclusive teaming agreement with Parry Labs, a leader in Modular Open Systems Approach (MOSA), to architect, develop, deliver and integrate digital engineering, software, and mission system hardware into AV’s upcoming P550 uncrewed aircraft system (UAS), purpose built for the U.S. Army’s Long Range Reconnaissance (LRR) program.

Parry Labs’ team of MOSA leaders and digital systems experts have created a foundational platform using an open and intelligent software stack, SWaP-C optimized hardware, and a digital engineering environment for collaborative build, test and integration. Designed with MOSA principles from inception, AV’s P550 UAS is perfectly aligned to adopt solutions from trusted partners such as Parry Labs to maximize warfighter capability and mission flexibility.

“Our customers rely on AV’s market-leading UAS to perform critical missions in challenging and hostile environments, while offering a verified and validated MOSA architecture from both software and hardware standpoints in order to eliminate vendor lock,” said AV’s Vice President of Engineering, Cris Sapera. “By teaming with Parry Labs, our valued P550 customers can expect a truly open system architecture that will have predefined Major System Components with validated open interfaces for quick, seamless replacement as needed.”

“We are excited to partner with AV to bring the benefits of MOSA to the enterprise,” said Parry Labs Chief Technology Officer, Dave Walsh. “Using an open systems approach on P550 provides the U.S. Army’s Uncrewed Aircraft Systems and Aviation offices reusable and portable infrastructure and capabilities, giving them the opportunity for fast and secure upgrades across programs and platforms.”

AV’s MOSA-enabled P550 UAS is purpose built for long range reconnaissance missions and features advanced AI and autonomy, maximum payload versatility, and rapid employment capabilities.

ABOUT PARRY LABS, LLC Parry Labs redefines the edge for the modern battlespace with digital systems integration that delivers rapid capability deployment and a decisive combat advantage. The company combines open software architecture and mission-proven hardware to create a common framework that’s integrated, agile and designed to deliver the most mission-critical technology at mission relevant speed across all services and domains. For more information, visit Parry Labs and follow us on LinkedIn.

AV (NASDAQ: AVAV) is a defense technology leader delivering integrated capabilities across air, land, sea, space, and cyber. The company develops and deploys autonomous systems, precision strike systems, counter-UAS technologies, space-based platforms, directed energy systems, and cyber and electronic warfare capabilities—built to meet the mission needs of today’s warfighter and tomorrow’s conflicts. With a national manufacturing footprint and a deep innovation pipeline, AV delivers proven systems and future-defining capabilities with speed, scale, and operational relevance. For more information, visit www.avinc.com.

Certain statements in this press release may constitute "forward-looking statements" as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements are made on the basis of current expectations, forecasts and assumptions that involve risks and uncertainties, including, but not limited to, economic, competitive, governmental and technological factors outside of our control, that may cause our business, strategy or actual results to differ materially from those expressed or implied. Factors that could cause actual results to differ materially from the forward-looking statements include, but are not limited to, our ability to perform under existing contracts and obtain additional contracts; changes in the regulatory environment; the activities of competitors; failure of the markets in which we operate to grow; failure to expand into new markets; failure to develop new products or integrate new technology with current products; and general economic and business conditions in the United States and elsewhere in the world. For a further list and description of such risks and uncertainties, see the reports we file with the Securities and Exchange Commission. We do not intend, and undertake no obligation, to update any forward-looking statements, whether as a result of new information, future events or otherwise.

**126 . Date: 14-02-2023Partnership - Babcock and IAI announce collaboration to develop remotely piloted aircraft applications for police, emergency services, maritime surveillanceURL: https://www.babcock.com.au/babcock-and-iai-announce-collaboration-to-develop-remotely-piloted-aircraft-applications-for-police-emergency-services-maritime-surveillance/**

Babcock Australasia (Babcock) and Israel Aerospace Industries Ltd (IAI) have signed a Memorandum of Understanding (MoU) to pursue remotely piloted aircraft (RPA) solutions for law enforcement, maritime surveillance, and disaster management applications in Australia.

With the signing of the MOU, Babcock and IAI are planning to undertake a series of in-country demonstrations of two of IAI’s unmanned aerial systems, the WanderB-VTOL and ThunderB-VTOL this year. As part of this demonstration they are engaging with State and Federal government law enforcement, emergency services and national security agencies to refine a range of practical operational concepts to prove the capabilities.

IAI’s VTOL unmanned aerial vehicles (UAV), provide important benefits for land and maritime applications as they combine the advantages of a fixed wing UAV (long range, long endurance, high speed, wind independency, large area coverage, etc.) with the advantages of a multi-copter. The company has over 250 WanderB-VTOL and ThunderB-VTOL systems in use by customers around the world.

Babcock’s Director of Aviation and Critical Services Peter Newington, said the new partnership with IAI will allow Babcock to offer ‘blended operations’ combining crewed rotary wing and fixed wing aircraft with uncrewed RPAs.

“This partnership with IAI is about bringing together solutions that are the best fit for our customers, integrating our rotary capabilities with RPAs to deliver the most effective and cost-efficient solutions.

“The addition of autonomous systems reduces operator workloads and augments existing capabilities with flexible, rapidly deployable, long endurance assets for law enforcement, maritime surveillance, disaster management or environmental situational awareness.

“The platforms are readily configurable to provide appropriate sensors for the task at hand coupled with the ability to distribute video and other user critical data in near real time across end-user networks.

“Importantly, a key element of our offer to state and federal government agencies is that Babcock already holds a Remotely Piloted Aircraft Operator’s Certificate (ReOC) which will allow us to operate RPAs like the WanderB-VTOL and ThunderB-VTOL in Australia,” Mr Newington said.

IAI Australia Managing Director, Mr Yonatan Segev said the partnership between IAI and Babcock would provide vital intelligence and situational awareness in real-time to the end-user, allowing them to effectively execute various missions while keeping the operators out of harm’s way.

“IAI’s systems have been tested in extreme environmental conditions and comply with the end user’s operational needs, providing them with significate operational advantages.

“From the Tactical WanderB-VTOL and ThunderB-VTOL systems to the medium-altitude long-endurance (MALE) Maritime Heron, IAI looks forward to bringing the most advanced technology together with our partners in Babcock to offer unique operational solutions to customers.”

VP&GM Malat Division IAI, Meir Shabtai, said “For four decades IAI has occupied a position as the pioneer and leader in the field of unmanned aerial systems, offering a broad range of strategic and tactical UAVs. Technological developments in the UAV field include Artificial Intelligence capabilities, integration of a wide range of sensors, and a precise real-time intelligence picture.

“I welcome our collaboration with Babcock, which is hugely important from both the viewpoint of Australia’s security and from the technological side, in terms of sharing both knowledge and technology.”

The two companies will be attending Avalon 2023 – the Australian International Airshow Aerospace and Defence Exposition – where they intend to engage with industry on this concept and upcoming demonstration.

**127 . Date: 13-12-2024Hybrid Rotary / Fixed Wing - Armed ISR / ISTAR - Tactical - General - PlatformBAE Systems Australia conducts first VTOL flight of new STRIX systemURL: https://www.baesystems.com/en-aus/blog/strix-achieves-first-flight**

STRIX has been uniquely designed to perform a range of autonomous missions independent of a runway, including air-to-ground strike, intelligence, surveillance, and reconnaissance. This will remove human crews from arduous or dangerous conditions and free up skilled personnel to focus on where they are needed most.

Operating a spiral development model, a full-scale electric prototype was designed and built to fast-track flight testing and reduce program risk.

Flight trials were undertaken at a remote site in late October following a successful ground testing program earlier in the year. The team demonstrated our Vehicle Management System’s (VMS) ability to control STRIX during launch, manoeuvre, sustained hover, and recovery.

All tests were conducted fully autonomously, with a remote pilot providing safety overwatch who was not required to intervene.

“This program milestone highlights the ingenuity and capability of world class Australian engineers and delivers on our proof of concept at rapid pace,” said Andrew Gresham, Managing Director of BAE Systems Australia’s Defence Delivery business unit.

“Major flight test objectives were achieved, including safe and autonomous control of an all-new VTOL aircraft configuration never flown before in the history of flight.”

The STRIX prototype features composite aerostructures and a unique ‘tilt body’ configuration, developed through a collaboration between BAE Systems Australia and Perth-based SME, Innovaero.

Since its unveiling at the Avalon Airshow in 2023, STRIX has moved from concept to autonomous VTOL flight within two years, demonstrating BAE Systems Australia’s ability to quickly deliver disruptive sovereign research and development.

STRIX draws on proven technologies, including those from BAE Systems’ previous autonomous systems, as well as our current work with the Australian Army’s M113 OCCV Program and the MQ-28 Ghost Bat for the Royal Australian Air Force.

The Program’s focus will now move from airframe testing to the hybrid-electric propulsion system, which has been under development in parallel with the prototype.

STRIX is being marketed to international and local customers, and BAE Systems Australia will continue refining the aircraft in collaboration with local industry and partners depending on their requirements.