**1 . Date: 22-06-2023Research - Small / Tactical - Contract - ANCILLARY Project Selects Teams to Develop Initial Concepts for VTOL X-PlaneURL: https://www.darpa.mil/news/2023/ancillary-vtol-x-plane**

DARPA has selected nine companies to produce initial operational system and demonstration system conceptual designs for a vertical takeoff and landing (VTOL) uncrewed aerial system (UAS) that can be deployed and retrieved without the large mechanical launchers and landing/recovery equipment used today. The AdvaNced airCraft Infrastructure-Less Launch And RecoverY program, nicknamed ANCILLARY, ultimately plans to flight demonstrate innovative aircraft configurations and critical technologies needed for a low-weight, large-payload, long-endurance VTOL uncrewed X-plane. AeroVironment, AVX Aircraft, Griffon Aerospace, Karem Aircraft, Leidos, Method Aeronautics, Northrop Grumman, Piasecki Aircraft, and Sikorsky will develop VTOL UAS designs, with Navy and Marine missions in mind, during the six-month Phase Ia. Teams then will submit competitive proposals for more detailed X-plane design work. “The objectives of the program are to develop a small UAS that takes off and lands vertically, like a helicopter, and flies its mission like very efficient winged aircraft, while carrying a significant amount of payload for a variety of missions,” said Steve Komadina, the DARPA program manager for ANCILLARY. “We are looking for a VTOL UAS that can operate from ship flight decks and small out-of-the-way land locations in most weather conditions without using typical launch and recovery equipment that is needed for current long endurance, high payload weight aircraft.” ANCILLARY aims to solve a combination of challenging design objectives by bringing together technology developments in advanced VTOL aircraft configurations, advanced propulsion architectures, and advanced control effectors/theory from traditional and non-traditional industry companies. “The major challenge is developing an integrated flight vehicle that meets the hard objective of combining VTOL, long endurance, and large payload while also meeting requirements for shipboard storage and operations,” said Komadina. “A key element is the propulsion system, which needs to have enough power to lift the X-plane vertically while also being extremely efficient in forward flight when power needs are lower.” The project is expected to culminate with X-plane flight tests in early 2026.

**2 . Date: 07-09-2023General - Engine / PowersourcePOWER Program Selects Teams to Design Power Beaming RelaysURL: https://www.darpa.mil/news-events/2023-09-07a**

DARPA is entering the first phase of the Persistent Optical Wireless Energy Relay (POWER) program, aimed at revolutionizing energy distribution through airborne wireless power transfer. Three teams -- led by RTX Corporation, Draper, and BEAM Co. -- will design and develop wireless optical power relays. The program goals include demonstrating the key components necessary for a resilient, speed-of-light energy network.

“This project has the potential to advance power beaming by orders of magnitude, which could radically reshape society’s relationship with energy,” said Dr. Paul Jaffe, who leads the POWER program at DARPA. “A wireless energy web could unlock power from new and diverse sources, including from space, and rapidly and reliably connect them to energy-starved consumers.”

To support rapid development, the optical energy relays designed in POWER’s phase one will be demonstrated in pods carried by existing aircraft in the project’s second phase. Additionally, power beaming will enable smaller, less expensive future aircraft since fuel storage and engine volume could be dramatically reduced. This will be explored through conceptual designs in phase one. Eventually these new, small, distributed platforms could provide cost-effective aircraft with unlimited range and endurance to support military missions. Each relay design will be evaluated based on accurate and efficient energy redirection, wavefront correction for high beam quality, and throttleable energy harvesting. In the third and final phase of the program, the relays will be demonstrated through an airborne optical pathway that aims to deliver 10 kilowatts of optical energy to a ground receiver that is 200 kilometers away from the ground source laser.

“Energy underpins every human activity, including defense. We need ways to deliver energy that overcome the vulnerabilities and other shortcomings of our current paradigm,” explains Jaffe. “The next leap forward in optical power beaming could hinge on relay technologies.”

Effective relays are a critical missing component necessary for a practical, flexible, and adaptive wireless energy web. These relays will overcome the unacceptable conversion losses that occur when changing from propagating waves to electricity repeatedly in a multiple-hop network. Relays also enable high-altitude transmission, which is vastly more efficient than beaming power through the thick, turbulent, lower atmosphere. This high-altitude optical layer will provide the long-range, high throughput backbone for the wireless energy web.

“Each of the selected teams proposed unique technical approaches to the power beaming relay problem, ranging from novel combinations of existing technologies to high-risk, high-reward technological innovations,” said Jaffe. “The range of proposed solutions encompasses a balance of assured performance and potential breakthroughs in size, weight, and power to enable small distributed systems for the future wireless energy web.”

The first phase will include benchtop demonstrations of critical technologies and is expected to last 20 months with potential for a three-month option of additional risk reduction efforts. The second phase will involve an open solicitation in early 2025 and will focus on integration of the relay technologies onto an existing platform for a low-power, airborne demonstration.

**3 . Date: 08-04-2025Loitering Munition - Requirement - Germany says adding explosive drones to weapons arsenalURL: https://www.defencetalk.com/germany-says-adding-explosive-drones-to-weapons-arsenal-80561/**

Germany said Friday it would buy explosive drones for the first time as Berlin boosts investments in its armed forces to counter the threat from Russia.

The government had signed two contracts to purchase so-called loitering munitions, defence ministry spokesman Mitko Mueller said at a regular press conference.

Western militaries have looked to the war in Ukraine, where drones have become a defining feature of the conflict, to draw lessons for their own armed forces.

Both Russia and Ukraine have used drones for reconnaissance and both are also launching attacks with loitering munitions.

These drones can hover over a battlefield until a target is identified. Equipped with explosive charges, they detonate when they enter into proximity to or impact their target.

Germany was “doing a lot” to develop its drone capabilities, Mueller said.

The ministry had ordered enough drones to “give them directly to troops for testing”, he said, without naming the suppliers.

Following initial tests, the army would make decisions over the wider deployment of the drones, which can be guided with the help of artificial intelligence.

Asked whether the drones would operate autonomously, Mueller said for Germany it was “clear that people make the decision about the use of the weapons”.

“That will not change,” he said.

Doubts over US security guarantees under President Donald Trump are prompting NATO allies in Europe to plan greater defence spending.

Germany’s incoming government last month passed changes to the country’s strict spending limits to clear the way for hundreds of billions of euros of new investments in defence and infrastructure.

**4 . Date: 02-05-2025Fixed Wing - Armed ISR / ISTAR - MALE - Safety - Algeria shoots down Malian UAV, escalating tensionsURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/algeria-shoots-down-malian-uav-escalating-tensions/**

A Malian unmanned aerial vehicle (UAV), or drone, shot down over the border in Algeria has escalated tensions between the two countries as they take different approaches toward Tuareg groups living along their shared border.

Algerian forces shot down the Turkish Akinci drone in early April after it crossed into Algerian airspace near the border community of Tin Zaouatine, a remote town deep in the Sahara that is a base for Tuareg rebels fighting Mali’s ruling junta. Malian officials claim the drone crashed 10 kilometers inside their border.

Tin Zaouatine was where Tuaregs in July 2024 killed 47 Malian soldiers and 84 Russian mercenaries belonging to the former Wagner Group, now known as Africa Corps, who fought with Malian forces.

The drone dispute is the latest escalation in tensions between Algeria and Mali, which began with Mali’s coups in 2020 and 2021. Relations deteriorated when Mali’s military rulers invited Russian mercenaries into the country in 2021 to help fight Tuareg rebels, whom Mali has labeled as terrorists.

Experts believe Mali hosts 1,000 to 1,500 Russian mercenaries. The junta calls the mercenaries trainers, but as shown in Tin Zaouatine, they frequently join the military in military operations.

Analyst Constantin Gouvy with the Clingendael Institute told Al Jazeera that Russian mercenaries’ strategy against suspected terrorists in Mali features “wanton violence against civilians.”

Algeria opposes Mali’s use of Russian mercenaries and the junta’s decision to treat the Tuaregs as terrorists. Algeria worries that Mali’s armed confrontations with Tuaregs in the Tin Zaouatine area — confrontations often made worse by the brutality of Russian mercenaries — could lead the fighting to expand into Algeria, which has its own Tuareg population.

Before the Malian junta overthrew its government, Algeria spent more than a decade mediating between the democratically elected Malian government and Tuareg rebels. Those negotiations produced the Algiers Accords in 2015. Mali’s ruling junta withdrew from the accords in 2023. It accuses Algeria of harboring the same Tuareg groups the junta is fighting.

Algeria recently deployed troops along its border with Mali to guard against infiltration by armed militants coming from Mali and its neighbors in the Alliance of Sahelian States (AES), Burkina Faso and Niger.

Mali called the destruction of the drone premeditated. In a joint statement, AES nations said Algeria’s action against the reconnaissance drone “prevented the neutralization of a terrorist group that was planning terrorist acts against the AES.”

“AES leaders’ council sees the shooting down of [a] Malian military operated drone as hostile against all members of AES and as treacherous action tending in some way to foment terrorism and destabilize the region,” Malian Foreign Minister Mali Abdoulaye Diop said in a statement.

In response to the drone incident, Mali and its AES allies pulled their ambassadors from Algeria. Algeria followed suit. A few days later Algeria and Mali closed their airspace to each other.

The Economic Community of West African States (ECOWAS) called for calm amid the rising tensions between Algeria and Mali. Mali and its AES allies left ECOWAS in January, but ECOWAS nations that border the AES remain on alert as violence permeating the Sahel threatens to spread south.

ECOWAS member states urged Algeria and Mali to “de-escalate the tension, foster dialogue and use regional and continental mechanisms to settle differences.”

**5 . Date: 10-03-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - General - PlatformALTI Unmanned takes flight into fully electric futureURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/alti-unmanned-takes-flight-into-fully-electric-future/**

Knysna, South Africa-based unmanned aerial systems (UAS) designer and manufacturer, ALTI has officially announced its transition to a fully electric fleet, starting with the launch of its Transition e-VTOL UAS.

The company said this aircraft represents a significant leap forward in sustainable aerial technology, catering to military, security, and conservation missions.

The Transition is ALTI’s first fully electric vertical take-off and landing (e-VTOL) aircraft, designed to enhance efficiency, reduce costs, and minimise environmental impact. Its all-electric propulsion system eliminates emissions while significantly lowering operational and maintenance expenses, it said. The aircraft has a three-hour flight endurance, a 100-kilometer range, and a cruise speed of 40 kilometres per hour.

Duran De Villiers, Founder and Director of ALTI Unmanned, noted the importance of this shift, stating that the “stems from the need to meet our clients’ evolving demands. We’ve focused on delivering an aircraft that’s as close to 100% reliable as possible, safe, cost-effective, and virtually undetectable. Our clients, whether in surveillance, reconnaissance, or conservation, require an aircraft that’s not only efficient but also silent and stealthy.

**6 . Date: 20-03-2023Armed ISR / ISTAR - MALE - Contract - Angola getting Aksungur UAVs from TurkeyURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/angola-getting-aksungur-uavs-from-turkey/**

Angola has ordered Aksungur medium-altitude, long endurance (MALE) unmanned aerial vehicles (UAVs) from Turkish Aerospace Industries (TAI), becoming the first confirmed African nation to do so.

Production of the aircraft has started, according to TAI (TUSAS) General Manager for Unmanned Aerial Vehicles, Omer Yildiz. In an interview with CNN Turk that was reported by SavunmaSanayiST, he said the Aksungur has been sold to export customers Kyrgyzstan and Angola but deliveries have not yet begun.

Yildiz revealed that eight Aksungur UAVs have been manufactured so far, and another six are on the production line, and the rate of production is increasing from one every three months to one a month.

The Angolan deal appears to go back to 2021 when Turkish President Recep Tayyip Erdoğan said in October that year Angola had asked to acquire Turkish UAVs and armoured personnel carriers following an earlier visit by Angolan President Joao Lourenco to Turkey. In October 2022, the Angolan government approved a $93 million contract with Turkish Aerospace Industries for UAVs, with the acquisition moving through Angolan public corporation Simportex.

Algeria was earlier reported as the first African export customer for the Aksungur, with Algerian media in October last year stating that the North African nation would acquire six of the aircraft, but this has not been officially confirmed.

TAI describes the Aksungur as being able to carry out day and night Intelligence, Surveillance and Reconnaissance (ISR) and strike missions with electro-optical/infrared and synthetic aperture radar (SAR) payloads, and a variety of air-to-ground weapons. Three hardpoints can carry 750 kg of weaponry, such as TEBER-81 and TEBER-82 laser-guided bombs, and L-UMTAS, MAM-L, Cirit, and MAM-C guided munitions.

The aircraft is powered by two PD-170 twin-turbocharged diesel engines enabling long endurance operations up to 40 000 feet. An optional satellite communications payload can allow beyond line of sight operations. The Aksungur is 12.5 metres long, has a wingspan of 24.2 metres and endurance of 50 hours (without weapons).

A maritime patrol version of the UAV is available, and this is fitted with a synthetic aperture radar, Automatic Identification System (AIS), sonobuoy pod, and magnetic anomaly detector (MAD) boom. TAI is also working on fitting a lightweight torpedo to the Aksungur.

The Aksungur was developed from the combat-proven Anka UAV and has been in Turkish Navy service since October 2021.

**7 . Date: 20-09-2024ISR / ISTAR - Mini - General - PlatformAvior Labs’ new VTOL UAV now in productionURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/avior-labs-new-vtol-uav-now-in-production/**

Centurion-based unmanned aerial vehicle (UAV) company Avior Labs has put its Elevation vertical takeoff and landing (VTOL) UAV into production, and is launching a new version of the aircraft at Africa Aerospace and Defence (AAD) 2024.

The new Elevation-G (Gimbal) aircraft is on display at Air Force Base Waterkloof for the exhibition. The first version was the Elevation-S (Survey), which was the original design intended for survey missions, and which can carry a variety of fixed high definition (HD), thermal or multispectral cameras. Elevation-G, in contrast, is designed for surveillance applications such as security and policing. It carries a NextVision DragonEye2 gimbal with its latest tracking computer and includes real-time video streaming.

“Both production versions of Elevation feature locally developed hidden embedded antennas that are part of the composite structure, along with various other improvements over the prototypes,” explained Dr Benjamin Broughton, Managing Director of Avior Labs.

Avior Labs unveiled the prototype Elevation at AAD 2022, and two years later low-rate production is underway, to be ramped up to full production in 2025. The company is open to accept orders on both versions (Elevation-S and Elevation-G) at AAD.

“We are one of very few truly South African VTOL manufacturers in the country capable of actual mass production of drone systems, including the airframes. The design IP, firmware, moulds, manufacturing IP and many of the electronic components are all our own, and we also own a patent and several trademarks associated with Elevation,” said Broughton.

“The airframes are manufactured at two facilities in Silverton and the final assembly, configuration, and software integration are done at our design and integration office in Irene. Excluding the payloads, our drones have approximately 85% South African content, and while we are actively marketing the drone overseas, we are also hoping to generate significant interest among local operators and government agencies at AAD.”

At AAD, Avior Labs has signed three agreements. The first, with Aerotechnic, will establish Aerotechnic as the exclusive global supply chain and procurement partner for Avior Labs. Secondly, an agreement with Litson and Associates Risk Management Systems will see joint development of a drone operations management system. Thirdly, Avior Labs and LambdaG signed a research and development partnership agreement to develop, integrate, and test enhanced embedded antennas suitable for UAVs and improved ground stations.

The Elevation UAV is a versatile, multi-role VTOL fixed-wing drone. It is fully electric with 90 minutes useful flight time in standard configuration. It has a single tilting propeller on the nose for flight efficiency, also creating an exceptionally low noise footprint (three other propellers around the airframe create vertical lift). The 2.54 metre wingspan Elevation has a maximum takeoff weight of 4.6 kg. The outer wings are detachable for transport and ease of assembly, allowing the UAV to be packaged in a convenient box that fits in the boot of a car.

Avior Labs said the Elevation-S is ideally suited to surveying areas of land around 200 hectares in size, and inspecting linear infrastructure such as pipelines, railroads, and transmission lines. The Elevation-G is equipped with an EO/IR gimbal payload and provides the perfect tool for surveillance or search & rescue activities day and night. Other applications include security, disaster management, deliveries, and precision agriculture.

Established in 2019, Avior Labs specialises in the development and manufacture of efficient commercial unmanned aerial vehicles, associated technologies and software. The company has designed and built aerial vehicles to develop and validate technologies, and these have also been used in support of computational modelling on behalf of its clients. Elevation is the first UAV designed by Avior Labs for commercial and military UAV operators and service providers.

**1 . Date: 08-01-2025Market - Chinese UAVs finding a large market in AfricaURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/chinese-uavs-finding-a-large-market-in-africa/**

If the United States have made unmanned aerial vehicles (UAVs, or drones) mainstream through their extensive use of such armed aircraft in their wars in Afghanistan, Iraq or Somalia, among others, it is surprisingly not the States that commands the lion’s share of the market.

China has become the world’s biggest exporter of UAVs, both armed and unarmed. In the last decade, the Stockholm International Peace Research Institute (SIPRI) reported that CASC, CAIG and other important Chinese UAV manufacturers sold 282 combat drones to 17 countries, while the United States only traded 12 armed UAVs.

Beijing successfully usurped Washington in this domain, producing an extensive array of drones since the early 2010s. Affordable, often reliable and free from ethical constraints, they are starting to become a real best-seller in Africa. The continent has the perfect use for these systems, as many countries face armed rebellion, jihadist movements, gang wars and difficulties to control their large territories. Moreover, China has brought an interesting way of paying: as some African countries are struggling to stabilize their public finances, Chinese companies are also accepting natural resources for payment.

Chinese UAVs offer long ranges, a variety of sensors and weapons payloads, and most importantly, are very cheap. With a price tag of $1 million, the Wing Loong I can carry two munitions, usually guided-bombs or missiles, enabling governments to track, observe, and conducts strikes all over their territory.

In the last several years, and in Africa only, it was Algeria (24 UAVs), Morocco (14 UAVs), Democratic Republic of Congo (9 UAVs), Egypt (4 UAVs), Nigeria (3 UAVs) and Ethiopia (unknown) that have been seduced by Chinese UAVs.

It is often the cheaper CH-4 and Wing Loong I, comparable to the American Predator, which are purchased, the few more capable Wing Loong II present in the continent, deployed in Libya for example, are often donations from Gulf States. The only exception being the richer Nigeria, which opted for the latter UAV to participate in its fight against Boko Haram, a jihadist movement plaguing Africa’s most populated country. Abuja was one of the first to buy Chinese UAVs, starting with smaller tactical CH-3s before 2014.

As most armed groups are short on air defence, UAVs can sometimes have a decisive impact on a conflict, the best example being Ethiopia. In 2021, the Tigrayan defence forces were storming on the capital from their positions in the north, causing panic in Addis Ababa as the government declared a state of emergency. Foreign powers started to ask their citizens to evacuate when drones entered into action, destroying columns of pick-ups and tanks only 200 km away from the city. Although it appears the UAVs were also Turkish (Bayraktar TB2) and Iranian (Mohajer 6), and not only Chinese (Wing Loong I), they proved their value. The same Chinese drones have since been suspected to be operated by the army against civilians from the Omoro, Ahmara and Tigray ethnicities.

Ethiopia’s government has also been supported by Wing Loong II strikes made by Emirati drones based in a secret base in Eritrea, further increasing the impact of these systems on the outcome of the war.

For its part, Egypt is also stepping up purchases of Chinese drones, with rumours of a contract for 32 Wing Loong 1Ds in 2021. So far, only four Wing Loong I appear to be employed, with future 1D upgraded versions of the UAV able to stay in air for 35 hours while carrying double the amount of armament. Cairo is an old client of Chinese drones, as the country bought and builds under license smaller ASN-209 observation drones.

The Egyptians’ armed drones have since been extensively used in Sinai to fight against the local Daesh uprising and near the Gaza strip to spot and hit smugglers’ tunnels. Sign that the Al-Sisi’s junta is mainly purchasing these drones to fight in guerilla-style conflicts, the Chinese manufacturer CAIG has been asked to integrate synthetic aperture radar in order to use the Wing Loongs to spot improvised explosives devices and roadsides mines.

An article from Al-Jazeera published in January 2023 also underlines a major fact of Chinese drones’ success in Africa: America’s export controls. Having signed in 1987 the Missile Technology Control Regime, made to prevent countries from accessing technologies able to carry nuclear, biological and chemical weapons, the US hasn’t been totally free to sell its UAVs. China has taken advantage of this gap, as well as of the desire of some Southern capitals to distance themselves from Washington. Moreover, US drones can be as much as 15 times more expensive to purchase: going for made-in-China UAVs can therefore help to build a much larger fleet for the same money. Not mentioning the fact that the munitions equipping these systems are also probably less expensive when procured by Beijing.

The latest African country seduced by the Chinese proposal is the Democratic Republic of Congo, which face tens of different armed groups in its western region. Kinshasa ordered in 2023 no less than nine CH-4s, with the first three having already been delivered. They are also showing another groundswell, as drones are often as effective as manned aircraft for bombing of lightly armed forces in low-intensity conflicts. This fact will create a lot of changes on the continent.

Indeed, Russia has been the traditional provider of old ground attack aircraft to many African countries, whether they are old Mig-21, L-39, more elaborate Su-25 or Mig-23 and even sometimes Su-27 fighters. But these are expensive to buy, to operate and to maintain. They also involve complex mechanic: a jet-engine is both harder to obtain and to repair than a small turboprop, and training pilots is also complex for some countries.

Drones are, besides for aerial policing operations, quite effective: they are cheap, easier to maintain and more discrete. Hence the switch in the military procurement of African militaries, moving from Russian aircraft to Chinese UAVs, which could eventually lead to a modification in geopolitical affiliations for some countries. This change could even be quicker than expected, as Russia is facing important losses in Ukraine, probably putting under stress the supply chain of parts for some aircraft such as the Su-25.

China, on its side, is putting on the market more and more potent drones, with CASC developing the Rainbow family: the new CH-5 is said to be equivalent to the Reaper drone; the CH-6 is propelled by jet engines and the CH-7 is considered an equivalent to the stealthy X-47B. The WZ-7 and WZ-10, from the same manufacturer of the Wing Loong, are marketed as the Chinese equivalent of the American RQ-4 Global Hawk high-altitude, long endurance UAV. Far from simply copying American drones, China is now proposing a whole generation of low-cost, unrestricted UAVs to win over the emerging African market.

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**2 . Date: 18-10-2024ISR / ISTAR - MALE - General - PlatformDenel launches new rotary wing UAVURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/denel-launches-new-rotary-wing-uav/**

As part of its product diversification strategy, Denel Aerospace has announced the launch of a new Rotary Wing Unmanned Aerial System (RW-UAS), designed primarily for surveillance, with the ability to provide situational information as well as detailed object or terrain data.

Some years ago Denel approached local universities to take part in the research and development of new generation aircraft: an unmanned helicopter (Prowler) and manned aeroplane (Small African Regional Aircraft – SARA). The Prowler was developed in conjunction with Armscor.

The resulting RW-UAS is day and night operable and is equipped with optical sensors and an optional radar sensor. The standard observation sensors include a thermal imaging camera, high definition colour TV camera, auto tracker, laser rangefinder and designator. The optional radar sensor offers synthetic aperture radar (SAR) and inverse synthetic aperture radar (ISAR) imagery as well as ground moving object indicator imagery.

Capable of automatic vertical take-off and landing, the RW-UAS can operate and navigate autonomously, with 10 hours of endurance with the standard payload. With an additional 80 kg payload, the system has a four hour endurance. Maximum take-off weight is 560 kg.

With a fully articulated five-blade main and tail rotor system, Denel notes the system has a low noise profile and can operate from a variety of landing zones, even from the back of a vehicle and vessels, making it competitive in this weight class.

The RW-UAS has an airframe length of 5.9 metres, with a rotor diameter of six metres, and a height of 1.7 metres. It is powered by a 4-cylinder, 4-stroke turbocharged petrol or diesel motor, capable of propelling it to a speed of 200 km/h.

Intended applications include law enforcement, public safety, border patrol, wildlife monitoring, area surveillance, powerline inspection, disaster management, search and rescue, communications relay, and geological surveying.

The aircraft’s flight modes include Autonomous mode, with autopilot control in accordance with a pre-planned flight plan, including auto take-off and landing. Trajectory mode makes use of autopilot, which executes route commands from the Ground Control Station (GCS). A sense and avoid capability is included, along with communications fail mode, which executes an autonomous flight to a predetermined landing point. There is also provision for engine rotor failure, which executes autorotation and an autonomous landing.

**3 . Date: 06-07-2023Armed ISR / ISTAR - MALE - Contract - DRC operating CH-4 UAVsURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/drc-operating-ch-4-uavs/**

The Democratic Republic of Congo (DRC) is the latest African nation to put the CH-4 unmanned aerial vehicle (UAV) into service after ordering nine from the China Aerospace Science and Technology Corporation.

Three CH-4s and a ground control station were seen at N’Dolo Airport in Kinshasha in a video that circulated last month, with one spotted taxiing past a hangar where another two were parked.

Satellite imagery seems to indicate a new hangar for the UAVs had been completed by May this year, with a taxiway leading off the main runway. Construction began around March.

Three CH-4s were apparently delivered from China in May out of an order for nine, Africa Intelligence reported, with remaining deliveries by year-end.

The UAVs have been acquired to help combat rebels in the conflict-ridden DRC, and form part of numerous other arms sales aimed at bolstering the DRC’s armed forces. South Africa, through Paramount, is for example supplying six Mwari light combat aircraft and Maatla light 4×4 protected vehicles.

The CH-4 was introduced in 2011 and has been in Chinese military service since 2014. The aircraft has a maximum take-off weight of 1 330 kg and a payload of 345 kg in addition to its electro-optical turret and synthetic aperture radar. The CH-4 has a wingspan of 18 metres and length of 8.5 metres. It is powered by a 100 hp class piston engine giving a top speed of 235 km/h and cruise speed of 180 km/h with endurance of up to 40 hours. It can carry a varied armament including cluster bombs, guided bombs and missiles.

The CH-4 has been acquired by Algeria, Jordan, Iraq, Indonesia, Pakistan, and Saudi Arabia, while China’s similar Wing Loong is – in Africa – in service in Morocco and Egypt. Algeria is an enthusiastic user of Chinese UAVs, and took delivery of five CH-3s for intelligence, surveillance, and reconnaissance (ISR), and five armed CH-4s – five armed CH-5s and Wing Loong IIs will also be delivered. Nigeria received several CH-3A UAVs in 2014 to combat Boko Haram terrorists, and is taking delivery of two Wing Loong II, four CH-4, and two CH-3 aircraft. Nigeria’s military is also getting Bayraktar TB2 UAVs from Turkey.

The United States’ unwillingness to supply export customers with armed UAVs means that nations like China are stepping in to fill the gap. The Stockholm International Peace Research Institute (SIPRI) notes that China has delivered 282 combat UAVs to 17 countries over the last decade, making it the world’s top seller of armed UAVs while the United States has only delivered 12 combat UAVs abroad in the same time (to France and the United Kingdom).

**4 . Date: 19-01-2024Armed ISR / ISTAR - MALE - Contract - Mali receives more Bayraktar TB2 UAVsURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/mali-receives-more-bayraktar-tb2-uavs/**

The Armed Forces of Mali have received another consignment of Baykar Bayraktar TB2 unmanned aerial vehicles (UAVs) from Turkey.

The Malian Presidency said the aircraft were officially delivered during a 4 January ceremony attended by Transition President Colonel Assimi Goita at Modibo Keita International Airport in the capital Bamako. Also in attendance was the Turkish ambassador and Mali’s minister of defence.

Five Bayraktar TB2s were seen during the reception ceremony, some armed with MAM-L laser-guided bombs made by Roketsan. One had the serial TZ-17D, indicating Mali now has at least 17 of the UAVs in service, as Mali had previously displayed TB2s with serials from TZ-01D to TZ-06D, Janes reported.

Chief of Staff of the Air Force, Brigadier General Alou Boï Diarra, said recent drone strikes have been carried out to secure the country – Mali’s military regularly releases footage of TB2s carrying out air strikes against terrorists – and he congratulated soldiers for fighting ‘a tough fight on the ground’.

Mali has been battered by an extremist campaign that began in the north of the country in 2012, with attacks spreading into Niger and Burkina Faso as well. As a result, Mali has turned to Russia and Turkey to supply equipment and paramilitary forces to shore up its military.

Diarra added that the war is certainly not over despite the positive results and all the efforts made, and also highlighted the efforts of militaries of the Sahel to secure common borders.

Defence Minister, Colonel Sadio Camara, said Mali has been regenerating it military capabilities over the last three years and thanked Russia, China, and Turkey for its assistance in this regard.

In mid-March 2023, Mali’s Air Force accepted a variety of new hardware into service, including TB2s from Turkey and L-39 trainer and light attack jets from Russia.

The UAVs have been in service for some time, with two being displayed at Air Base 200 at Mopti-Sevare airport in December 2022, but official induction only came in March last year. Mali became the fifth country in West Africa to acquire Bayraktar TB2s after Niger, Burkina Faso, Togo and Nigeria.

At least nine L-39s have been acquired – some of these were inducted in January 2023, along with two Mi-8 helicopters (TZ-94H and TZ-95H), and a single Su-25 strike aircraft (TZ-25C). The latter replaced a Su-25 (TZ-29C) that crashed in October 2022, killing the Russian pilot. That aircraft was delivered from Russia in August 2022, along with a single Su-25 jet, four L-39 jet trainers, an Mi-24P attack helicopter, an Mi-8 transport helicopter and a single Airbus C295 tactical transport aircraft. The C295 aircraft is the second to be acquired, with the first delivered in December 2016. Two Mi-24Ps were delivered to Mali on 30 March 2022, along with Protivnik-GE/59N6-TE mobile radars from Russia. Mali also recently acquired four Mi-35s from Russia.

According to the Stockholm International Peace Research Institute’s arms transfers database, Mali in 2020 ordered four Mi-8MT/Mi-17Sh helicopters from Russia for $61 million including training and weapons, with deliveries from 2021.

**5 . Date: 05-06-2024Armed ISR / ISTAR - MALE - General - PlatformMilkor announces new partnership for maritime version of the Milkor 380 UAVURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/milkor-announces-new-partnership-for-maritime-version-of-the-milkor-380-uav/**

Milkor has established a strategic partnership with Germany’s Aerodata AG to develop a new specialised platform for maritime surveillance, the AeroForce 380, based on the Milkor 380 unmanned aerial vehicle (UAV).

At the Paris Air Show 2023, Aerodata and Milkor solidified its commitment to cooperation with a Memorandum of Understanding. Now, the AeroForce 380 will officially be launched during the ILA Berlin Air Show 2024, which runs from 5 to 9 June.

This Medium Altitude Long Endurance (MALE) UAV, tailored specifically for maritime surveillance and coast guard missions, is capable of reaching a service ceiling of 30 000 feet, with enhancements to the design made to effectively operate in the low altitude segment (below 10 000 feet) ideally suited for maritime surveillance operations. Additionally, the UAV boasts an endurance of up to 35 hours, ensuring extended mission coverage and increased operational efficiency, Milkor said. Payload is up to 250 kg, with sensors including AIS, side-looking airborne radar, and electro-optical/infrared gimbals.

“With a maximum take-off weight of 1 300 kg and the capability to carry mission-specific payloads, the AeroForce 380 has the potential to revolutionise surveillance aircraft fleets worldwide,” Aerodata said. “It’s worth noting that Aerodata’s contribution includes state-of-the-art mission system technology, complemented by maritime surveillance sensors from its subsidiary, Optimare Systems GmbH. This integrated approach guarantees optimal performance and support, ensuring the AeroForce 380 remains at the forefront of maritime surveillance technology.”

Harry Cassidy, Milkor’s head of Business Development in Europe, highlighted the importance of this partnership. “The Milkor 380 has garnered substantial interest from multiple entities looking to enhance their aerial surveillance and reconnaissance capabilities. With the addition of Aerodata’s experience in maritime surveillance sensors, the development of the AeroForce 380 will set a new standard in global maritime by combining state of the art unmanned technologies with proven maritime surveillance sensors. The collaboration is one of the key explorations Milkor is undertaking to meet the growing demand for sophisticated UAV solutions and underscores Milkor’s role as a premier partner in the international defence sector.”

“The Milkor 380 has reached a stage where it is ready to be deployed for operations and we look forward to working with these entities to enhance their aerial surveillance capabilities. We are receiving positive feedback from many more interested parties and had to look at our production capabilities to meet their requirements. We expect that the Milkor 380 would be used for a variety of operations that will demonstrate its versatility,” said Ghaazim Rylands, CEO of Milkor Integrated Systems in Cape Town.

Milkor expects to deliver several units of the Milkor 380 within the next 12 months to undisclosed clients with manufacturing well underway of six units to be completed by end of 2024.

“This rapid production and deployment schedule underscores Milkor’s dedication to meeting market needs with cutting-edge UAV technology,” the company said, adding that “the Milkor 380 is considered one of the most versatile unmanned platforms suitable for intelligence gathering, surveillance, target acquisition and reconnaissance (ISTAR) operations.”

**6 . Date: 03-04-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - Milkor busy with Milkor 380 production and deliveries as UAV project enters a new phaseURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/milkor-busy-with-milkor-380-production-and-deliveries-as-uav-project-enters-a-new-phase/**

Milkor continues to make strides with its Milkor 380 unmanned aerial vehicle (UAV), with the project now moving from its development phase to an industrial phase.

This is according to Daniel du Plessis, Milkor’s Marketing and Communications Director. Speaking exclusively to defenceWeb, du Plessis said: “the project is now essentially moving away from a development phase. Up until 2023 we were still developing quite a few things in terms of software hardware and aircraft components, as well as testing.”

This culminated in the Milkor 380’s first flight in September 2023, with du Plessis adding that “a very stringent flight-testing campaign has taken place since then.”

Flight testing has primarily taken place at Air Force Base Overberg, co-located with the Denel Overberg Test Range (OTR), and overseen by the South African Air Force with which Milkor has a testing and evaluation agreement. The Western Cape facility is situated across 43 000 hectares with a 70 km coastline facing virtually unrestricted sea; the air base at Overberg provides runway and ground support services for all types of aircraft.

Du Plessis told defenceWeb “the project is essentially nearing the end of its maturity in terms of development but now more nearing more towards a finalised solution.” He added that, “we are expecting to see a rapid increase in the industrialisation cycle and also the manufacturing capabilities within the company to keep up with the demand for pending contracts that we’re expecting.”

Annual UAV production stands at eight per year, with plans to reach sixteen units a year by 2026. Last year Milkor had half a dozen Milkor 380s under construction at its Cape Town manufacturing facility.

The Milkor 380 was developed from the earlier MA (Milkor Aeospace) 80, an 80 kg demonstrator which flew in 2017. As a Medium Altitude Long Endurance (MALE) UAV, the Milkor 380 boasts impressive specifications, having a wingspan of 18.6 meters and a maximum take-off weight of 1 500 kilograms, making it the largest such aircraft designed and built in Africa.

It is built to carry out extended operations and boasts a maximum endurance of 30 hours (when flying at 60 knots and an altitude of 10 000 feet above mean sea level) and a range of over 4 000 kilometres, making it ideal for long-range missions such as border surveillance, maritime patrols, and combat operations.

The UAV is equipped with dual redundant Line of Sight (LOS) communications systems that can maintain contact with its control unit for up to 250 km, with seamless transition between Line of Sight and Beyond Line of Sight (BLOS) communications, such as SATCom.

Milkor has partnered with leading companies, such as Germany’s Hensoldt, to integrate sophisticated sensor suites, including the ARGOS II HDT Airborne Observation System with laser designator capabilities. These sensors are designed for precision targeting in combat operations and enhance the UAV’s intelligence-gathering and electronic warfare capabilities. The Milkor 380 can carry up to 220 kg of payload, including munitions, communication pods and electronic warfare systems.

The Milkor 380 is powered by a four-stroke, four-cylinder turbocharged Rotax 915iS engine developing 135 hp, which gives a maximum speed of 250 km/h and cruising speed of 110-150 km/h.

Payload is 220 kg (excluding fuel), with each outer wing hardpoint able to accommodate 80 kg while each inner wing hardpoint can carry 150 kg. An underbelly station is designed to accommodate the largest payload and is rated to 400 kg. The aircraft’s nose is capable of housing several different electro optical/infrared and radar sensors.

The Milkor 380 can be armed, and has already been displayed with Al Tariq X-series precision guided munitions, Halcon Desert Sting DS-16 guided bombs, and FZ602 laser-guided rocket launchers. A mockup of a Milkor-developed missile has also been shown under the aircraft, as Milkor is exploring in-house missile development.

While the Milkor 380 is primarily designed for military use, Milkor envisions dual-purpose applications, particularly in the civilian and commercial sectors. For instance, it can be deployed for maritime surveillance, wildlife conservation and humanitarian missions. The company has partnered with Aerodata AG, a German firm specializing in maritime surveillance, to explore the UAV’s potential in monitoring special economic zones and conducting routine maritime patrols. This version is known as the AeroForce 380.

The Milkor 380’s production phase has paved the way for an even larger follow-on project, the Milkor 780. This high-altitude, long-endurance UAV is expected to carry 2 700 kilograms of payload and have a flight time of 30–40 hours. Milkor hopes to unveil it at the 2026 edition of the Africa Aerospace and Defence (AAD) exhibition.

Milkor is participating in the LAAD 2025 exhibition currently underway in Rio de Janeiro, Brazil, from 1 to 4 April, where it is showcasing its air, land, and sea solutions.

**7 . Date: 29-11-2023ISR / ISTAR - Small - General - PlatformNew South African UAV unveiled for security and other missionsURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/new-south-african-uav-unveiled-for-security-and-other-missions/**

South African company Aquila Viour has designed and manufactured a rugged new unmanned helicopter for security and other missions.

The Alto unmanned aerial vehicle (UAV) was demonstrated at the recent DCD Protected Mobility demo day where it was fitted with Global Command and Control Technologies’ Chaka command and control system and Rajant Corporation communications system as well as a camera, but it is payload agnostic and can accommodate a variety of payloads – the current version can carry 3 kg (the aircraft weighs 8 kg empty), but future versions will be able to carry 5 and 15 kg payloads ranging from electro-optical gimbals to synthetic aperture radar.

Optional equipment includes a terrain following sensor, laser radar (LIDAR), anti-jam GPS, ADS-B transponder and collision avoidance system.

Aquila Viour (Eagle Eye) Director Leon Labuschagne told defenceWeb the Alto is designed to fit between low- and high-end UAVs and has lots of applications in the mining, police, private security and defence sectors, with one customer looking to use it for patrolling game reserves, and the SA Navy interested in using it at night for detecting divers and boats, for example. Other possible uses are stringing ropes across a river, delivering medical supplies, demining with a ground penetrating radar etc. The UAV can land on boats/ships, giving it a maritime application.

It can operate autonomously after receiving its flight plan or can patrol areas of interest. By using the latest advances in artificial intelligence, robotics, image processing and synthetic aperture radar techniques, targets can be located and identified in challenging environments, for example in dense bush or search and rescue over land and sea.

The Alto’s airframe is made from carbon fibre and as such has been designed for harsh African conditions. A Japanese-built two stroke piston petrol engine was chosen as its power plant as this allows for longer endurance than electric motors – endurance is over two hours and range 15-20 km. Cruise speed is 54 km/h and maximum speed 90 km/h, with maximum altitude 3 000 metres. According to Aquila Viour, the Alto has favourable operating costs – R85 per hour compared to R140-150 for a comparable DJI UAV.

The company claims a noise level of below 90 decibels, making the Alto practically undetectable for sound and sight from the ground when flying at heights over 500 metres (noise can be reduced to 38 decibels with an optional muffler). As a true helicopter rather than a multicopter, Aquila Viour says it can operate in gale force wing up to eight on the Beaufort Wind Scale (62-74 km/h).

Aquila Viour was established last year, but the Alto has been in development for about five years. Manufacturing is taking place at the company’s facilities at the Council for Scientific and Industrial Research (CSIR) in Pretoria.

The Alto was in 2022 recognised by the Department of Trade and Industry as an innovation participant for applications in the fields of reconnaissance and surveillance.

**8 . Date: 22-02-2023Loitering Munition - Small - General - PlatformParamount putting N-Raven loitering munition into productionURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/paramount-putting-n-raven-loitering-munition-into-production/**

Paramount Aerospace Systems (PAS) will be putting its N-Raven loitering munition into production in April this year with first deliveries in October, the company has revealed during the IDEX defence show in Abu Dhabi.

The N-Raven was first announced by Paramount Advanced Technologies during the 2021 edition of IDEX in the United Arab Emirates – at the time it featured a swept wing and T-tail mounted above the fuselage, but current renders of the propeller-driven munition show a straight wing (with winglets) and V-tail.

Paramount said the N-Raven family of autonomous, multi-mission aerial vehicles will feature next generation ‘swarm’ technologies to accomplish numerous missions with pinpoint precision. Three different models will be available: GPS guided; fixed optical seeker head target identification, recognition and tracking; and a gimbal version of the optical seeker head. All these technologies including the hardware, software and artificial intelligence (AI) have been developed by Paramount.

The swarming version of the N Raven is “in advanced stages of development” and is scheduled to be industrialized in the second half of 2024.

The N-Raven weights 55 kg (up from 41 kg announced in 2021) and will have a speed of 180 km/h and loitering endurance of about two hours for the electric version, and 4.5 hours for the petrol version, and range of up to 100 km. The munition has a wingspan of 3.6 metres and carries a 13.5 kg payload.

“Designed to strengthen armed forces’ aerial reconnaissance, engagement and precision strike capabilities, while removing humans from harm’s way, the N-Raven addresses the increasing requirements of governments for defence industrial autonomy and maintaining security of supply”, said Paramount Global CEO, Steve Griessel.

“The N Raven is a lightweight solution yet with the capacity to immobilise convoys and supply lines and in doing so, deplete enemy capabilities,” he continued. It can be launched from land-based and naval platforms.

“Recent conflicts around the world have confirmed that loitering munitions will play a key role on the new battlefield. This ingenious, affordable technology increases mission survivability and success, enhances real time actionable intelligence, minimises exposure of friendly forces, and in doing so, provides armed forces around the world with an unassailable advantage,” said Griessel.

In line with its emphasis on portable manufacturing, Paramount said that the N-Raven has been digitally designed with quick transfer of technology in mind, to enable governments to manufacture these loitering munitions in their countries, in less than one year.

**9 . Date: 12-07-2024ISR / ISTAR - Small - General - PlatformSSASS Holdings locally producing multirole fixed wing VTOL UAVsURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/ssass-holdings-locally-producing-multirole-fixed-wing-vtol-uavs/**

South African company SSASS Holdings (Solutions, Sensors, Aircraft, Software and Services) is assembling fixed wing vertical takeoff and landing unmanned aerial vehicles (UAVs) at its new Centurion facility for surveillance, monitoring and other tasks.

SSASS CEO Dean Polley, exhibiting at the Aero South Africa exhibition at Wonderboom airport last week, told defenceWeb that his company opened a new premises in Centurion in September last year and is assembling its SR series fixed wing aircraft with a quadcopter component for vertical takeoff and landing (VTOL). Transitioning to horizontal flight gives far greater range than pure VTOL aircraft.

SSASS offers a range of UAV solutions, but its largest and most important types are its SR series, offered for aerial surveillance and monitoring, surveying, mapping and photogrammetry, agriculture and farming, law enforcement and other roles.

The SR-50 is the largest in the series with a 4.8 metre wingspan, 15 kg payload, 82 km/h speed and 50-100 km control range. The SR-50E electric version has a 4.5 hour endurance while the SR-50H petrol version can fly for ten hours.

In the middle is the SR-25E with a 4.2 metre wingspan, 10 kg payload, 3.5 hour endurance, 70 km/h speed and 50-100 km control range. On the smaller side is the SR-10E with a 2.4 metre wingspan, 1.5 kg payload, three hour endurance, 70 km/h top speed and 10 km control range.

Each aircraft is built to order in line with client specifications and can be fitted with multiple payload options in a quickly detachable payload pod. Payload options range from mapping systems to electro-optical/infrared cameras with object tracking etc. For military applications, although the aircraft are designed for use in non-combat security and surveillance roles, they do facilitate the installation and integration of select weapon systems that could be used in supporting ground troop operations if required.

SSASS completed tests flights of its first SR-25E in February, and has a first local client for the model, which is fitted with a RIEGL miniVUX-1UAV laser scanning system but the open payload bay can accommodate a multitude of customised payload applications – the client has three payload options.

Airframes are manufactured in China and the avionics are sourced from uAvionix Corporation in the United States, with assembly and customisation in South Africa. Total lead time from order to delivery of an aircraft is six to eight weeks, including airframe manufacture, payload integration, and testing.

The avionics supplied by uAvionix Corporation include the George G3 autopilot, truFYX GPS, SkyLink radio systems, pingRX Pro ADS-B receiver and a ping200X Mode S ADS-B transponder. What differentiates the SR series from other platforms is the separation of the command and control (C2) radio link from the data and gimbal control radio link. The onboard SkyLink air radio system is seamlessly integrated with the George autopilot and is paired with the SkyStation ground radio system. This provides a Control and a Non-Payload Communications (CNPC) link which is unique to unmanned systems. Multiple SkyStations can be deployed to support network and frequency roaming on the SkyLine C2 network.

With the 10 Watt radio, UAV communications range is 160 km, but if the radios are connected to Starlink satellite, communications range could be unlimited, and the aircraft could be flown from anywhere.

In addition to UAVs, SSASS brought to Aero South Africa 2024 its UAV mobile operations vehicle, which contains a fully configured ground control station. It also displayed its various avionic components – SSASS is a reseller of Sagetech micro transponders, and supplies these for the locally manufactured Milkor 380 UAV – the largest such aircraft designed and built in Africa.

Drone in a box

SSASS sees a bright future for UAVs, especially as artificial intelligence and automation make them more accessible, and prices continue to come down. One new innovation Polley sees promise in is the ‘drone in a box’. On the SSASS display stand at Aero South Africa was a DJI Dock 2 ‘drone in a box’ – a self-contained UAV launching system complete with weather station and power supply. An operator can install the box and leave it until connecting from anywhere in the world to either launch and fly the drone manually or autonomously – on day one of Aero SA 2024, SSASS flew a ‘drone in a box’ mission from 40 km away.

The UAV can be automatically launched to perform pre-programmed surveillance routes, for example, and when it’s done it returns to the box and charges up for the next mission through wireless induction charging. Endurance is 35-40 minutes and range 7 km. In South Africa, one of the first applications is deployment in a residential estate in Johannesburg.

Polley told defenceWeb the ‘drone in a box’ solution would be ideal for mining surveillance – one client manually flies UAVs to detect illegal miners every night, but the operators require an armed guard as there have been attacks on them. Using a ‘drone in a box’ solution would reduce the risk and staff required and reduce overall costs, he said.

**10 . Date: 14-02-2024Armed ISR / ISTAR - Tactical - General - Sudanese Armed Forces using Irianian UAVsURL: https://www.defenceweb.co.za/aerospace/aerospace-aerospace/sudanese-armed-forces-using-irianian-uavs/**

The Sudanese Armed Forces has begun using Iranian-made Mohajer-6 unmanned aerial vehicles in its ongoing fight against the Rapid Support Forces, raising the prospect of increasing Iranian influence in the region.

The images of a wrecked unmanned aerial vehicle that Sudan’s Rapid Support Forces (RSF) posted to its social media channels in late January confirmed what many observers have suspected: Iran is supplying weaponized drones to the Sudanese Armed Forces (SAF).

Through images posted online by the RSF, experts were able to identify the vehicle as an Iranian-made Mohajer-6 combat drone. The RSF said on X, formerly Twitter, that it had shot down three such drones recently.

The Mohajer-6 can carry up to four air-to-surface missiles along with surveillance equipment. It has a maximum speed of 200 kilometers per hour.

Satellite images released in early January by Planet Labs Inc. show Mohajer-6 drones and a ground-control vehicle on the runway at Wadi Sayyidna air base about 22 kilometers north of the capital, Khartoum.

The revelation was the latest escalation in the continuing struggle for control of Sudan between the RSF, led by Gen. Mohamed Hamdan “Hemedti” Dagalo, and the SAF led by Gen. Abdel Fattah al-Burhan. The conflict has killed tens of thousands of people, displaced 11 million, destroyed communities in Darfur and heavily damaged the region around Khartoum.

Both sides regularly use drones for surveillance. The SAF has posted videos recently that have been shared on X showing attacks on RSF positions from kamikaze drones and from drones dropping mortars on RSF fighters. It was unclear whether the drones in the videos were Iranian made.

The RSF, in turn, uses its own drones to surveil and attack SAF forces, along with surface-to-air missiles capable of shooting down drones and other aircraft.

Officials visited Iran in December seeking deadlier drone technology to help the SAF regain ground lost to the RSF, which now controls much of Darfur and southern Sudan, including key agricultural land in El Gezira State. The SAF, which operates largely out of Port Sudan, controls the Nile River corridor and eastern provinces, including the Red Sea coast.

The presence of Mohajer-6 and similar drones is a reminder that the SAF continues to rely on aerial attacks and heavy weaponry against the RSF, whose fighters served as the SAF’s ground forces under deposed dictator Omar al-Bashir. RSF fighters have taken up positions in residential buildings and hospitals, resulting in large-scale damage and loss of life from SAF attacks against them.

The Sudan War Monitor confirmed the arrival of Iranian cargo planes in Sudan in late January. A few days later, Sudanese officials on behalf of the SAF were back in Iran negotiating to restore diplomatic ties after a seven-year break.

Analysts with the Sudan War Monitor say Iran’s involvement on the SAF’s side threatens to turn Sudan’s internal conflict into a proxy war between Iran and the United Arab Emirates, which has supplied weapons and other material to the RSF in exchange for gold smuggled out of Darfur.

Across the Red Sea, in Yemen, Iran has supplied drones to the Houthi rebels for attacks against the UAE and Saudi Arabia. Observers worry that Iran’s drone sales will give it a foothold in Sudan from which it can influence other countries in Northern and Central Africa.

Writing in Medium, analyst Ira Sahani suggested that the addition of Iranian drones could tip the conflict in the SAF’s favor.

“The introduction of Iranian drones adds a layer of complexity to an already intricate conflict,” Sahani wrote. “The use of advanced weaponry in a civil war not only escalates the violence but also raises concerns about the potential for regional destabilization.”

Written by Africa Defense Forum and republished with permission. The original article can be found here.

**11 . Date: 06-01-2023Requirement - Landward force seeking UAVsURL: https://www.defenceweb.co.za/featured/landward-force-seeking-uavs/**

The SA Army plans to acquire unmanned aerial vehicles (UAVs) for reconnaissance and target acquisition according to a now closed Armscor tender.

Documentation issued for tender ECAC/2022/154, including specifications for BBBEE (broad-based black economic empowerment) run to 42 pages but do not make mention of how many UAVs the landward force is looking to add to its equipment store.

As expected for reconnaissance purposes the UAV sought is not a large one with a maximum take-off weight of 9kg and an endurance of 55 minutes. The tender further doesn’t specify whether a single propeller or multi-rotor platform is wanted to provide data to ground-based stations for targeting solutions or other actions.

The UAV operator must be able to “work” his platform from a maximum unobstructed distance of 15km. He or she will use an external battery with a 7,6 voltage rating to provide power while the UAV’s built-in battery should be a 18650 lithium ion one with a 17v power rating and 135 minute charging time. Expected battery endurance is two hours 30 minutes for the UAV mounted one and four hours 30 minutes for the external ground station one.

The landward force previously indicated a need for UAVs to work in the border protection tasking Operation Corona.

As far as is known Defence Intelligence (DI) operates an unknown number of Denel Seeker UAVs.

At the time of publication Armscor had not made known any successful bidder for the SA Army UAVs.