**1 . Date: 20-10-2023Cargo - MALE - General - ADEX 2023: Hyundai, Kia unveil hydrogen-fuelled cargo droneURL: https://www.janes.com/defence-news/air-platforms/latest/adex-2023-hyundai-kia-unveil-hydrogen-fuelled-cargo-drone**

Hyundai Motor Group and its sister firm Kia unveiled the hydrogen-fuelled cargo (HFC) concept drone at the Seoul International Aerospace & Defense Exhibition (ADEX) 2023 held from 17 to 22 October.

A Kia official told Janes that the new platform represents the next phase of the Kia and Hyundai group's focus on developing hydrogen-fuelled unmanned aircraft.

In 2022 Hyundai revealed its Project N multicopter drone powered by a combination of hydrogen fuel cells and batteries.

The KIA official added that Project N drone has been flying since 2022 to mature hydrogen fuel cells technology.

The operational parameters envisaged for the HFC drone include a cargo carrying capacity of 200 kg and a flight endurance of two hours. The hydrogen fuel cell system from Project N drone will be incorporated into the HFC drone for military operations, the KIA official said.

The HFC drone model displayed at ADEX 2023 featured a swept-back wing design. The model featured two tiltable ducted fans on the wings (one on each wing), and two ducted fans at the aft section, one each on either side of the fuselage. The model did not feature any prominent tail section.

Details about the HFC drone's hydrogen fuel cells and powertrain were not disclosed.

**5 . Date: 16-02-2023ISR / ISTAR - Mini - General - PlatformAero India 2023: EndureAir Systems showcases enhanced Vibhram-G UAVURL: https://www.janes.com/defence-news/air-platforms/latest/aero-india-2023-endureair-systems-showcases-enhanced-vibhram-g-uav**

Noida-based EndureAir Systems displayed an enhanced version of its Vibhram-G (gasoline powered) unmanned aerial vehicle (UAV) at the Aero India 2023 show, held in Bangalore from 13 to 17 February.

Rama Krishna, CEO of EndureAir Systems, told Janes that the UAV has been enhanced to meet the Indian military's requirements for persistent intelligence, surveillance, and reconnaissance (ISR) capability. In its latest iteration, Vibhram-G features a maximum range of 100 km, an endurance of 3 hours, a maximum take-off weight of 15 kg, and a maximum speed of 60 km/h. Development work on the enhanced Vibhram-G was completed in the last five months, Krishna said.

The new version of the Vibhram-G has an enlarged canopy that accommodates an additional fuel tank, increasing the fuel capacity to 4 litres as compared with the 2.5 litres available in earlier iterations. The powerplant has also been integrated with an electronic fuel injection system (EFI), providing enhanced combustion and reduced engine maintenance cycles.

The Vibhram-G UAV uses a commercial-off-the-shelf dual sensor stabilised gimbal, fitted under its nose section. The payload has an 80x zoom capability during daytime and a resolution of 1280×720 during night.

The enhanced Vibhram-G uses 256-bit encryption for communication links as opposed to the 128-bit encryption in previous versions. The UAV also makes use of digital surface model (DSM) maps for navigation.

Krishna said the Vibhram-G UAV has conducted multiple flight tests in the country's southwestern regions under the supervision of the Indian Army's South Western Command. The regional topography has delimiting geographical borders covered with sand, which increases the possibility of sand ingress in the exposed functional parts of the UAV.

**6 . Date: 16-02-2023Solar ISR / ISTAR - HALE - General - PlatformAero India 2023: Garuda Aerospace introduces Suraj solar-powered UAVURL: https://www.janes.com/defence-news/air-platforms/latest/aero-india-2023-garuda-aerospace-introduces-suraj-solar-powered-uav**

Chennai-based Garuda Aerospace unveiled a model of a solar-powered high-altitude pseudo satellite (HAPS) platform named Suraj at the Aero India 2023 show, which is being held in Bangalore from 13 to 17 February.

The HAPS unmanned aerial vehicle (UAV) is being developed by the company under the guidance of India's National Aerospace Laboratories (NAL) and the Defence Research and Development Organisation (DRDO).

Agnishwar Jayaprakash, founder and CEO of Garuda Aerospace, said that the Suraj system is being developed to provide persistent intelligence, surveillance, and reconnaissance (ISR) capability to the Indian Armed Forces. HAPS platforms typically fly at altitudes of about 20 km or more.

The Suraj model unveiled at Aero India 2023 featured two pod-like structures that accommodate a propulsion system driving two-bladed propellers in tractor configuration, high-mounted wings that have a span of 26 ft, and twin tails incorporating control surfaces.

The upper surface of the wings is equipped with an array of solar cells. The UAV also has an auxiliary battery for further thrust and has an estimated flight endurance of 12 hours.

Suraj is capable of carrying payloads up to 10 kg. The payloads can include light detection and ranging (LIDAR) and thermal imaging sensors. It has a bionic chip, artificial intelligence, and machine learning for real-time processing.

**7 . Date: 16-02-2023ISR / ISTAR - Small - Contract - Aero India 2023: IAF to receive 100 loitering munitions from TASLURL: https://www.janes.com/defence-news/air-platforms/latest/aero-india-2023-iaf-to-receive-100-loitering-munitions-from-tasl**

Tata Advanced Systems Limited (TASL) is delivering 100 units of its Advanced Loitering System-50 (ALS-50) to the Indian Air Force (IAF), sources familiar with the matter told Janes at the Aero India 2023 show being held in Bangalore from 13 to 17 February.

The deliveries are expected to be completed by the end of this year, the sources said.

ALS-50 is a vertical take-off and landing (VTOL) unmanned aerial vehicle (UAV) that has a length of 2.4 m, a wingspan of 3.8 m, and a maximum takeoff weight of 50 kg.

It has a cruise speed of 100 km/h, an endurance of more than 1 hour, and a range of more than 50 km, the sources added.

The UAV can carry a range of anti-personnel and anti-armour warheads weighing up to 6 kg including explosively formed penetrator (EFP), the sources said.

The ASL-50 model displayed at Aero India 2023 features a rectangular fuselage with rounded edges, shoulder-mounted straight wings, and a conventional tail configuration with an additional ventral tail.

The wings are fitted with port and starboard underwing fairings. Each fairing is fitted with fore and aft electric lift engines driving two-bladed propellers.

The UAV is fitted with a chin-mounted electro-optic/infrared (EO/IR) turret, a rear-mounted engine, and a fixed landing gear consisting of four landing legs.

ALS-50 can operate at temperatures ranging from -30°C to +50°C. It can be launched and recovered at an elevation of 3000 m above mean sea level (AMSL), and has a service ceiling of 4000 m AMSL, the sources informed Janes.

**8 . Date: 11-10-2023ISR / ISTAR - Mini - General - PlatformAUSA 2023: Quantum-Systems unveils Twister small UAVURL: https://www.janes.com/defence-news/air-platforms/latest/ausa-2023-quantum-systems-unveils-twister-small-uav**

Quantum-Systems unveiled the Twister small unmanned aerial vehicle (UAV) at the Association of the United States Army (AUSA) 2023 symposium in Washington, DC, complementing the manufacturer's larger Vector UAV.

Twister, which can be carried disassembled into six parts in a manportable rucksack, has a 4.1 ft (1.2 m) wingspan (assembled) and weighs 5.5 lb (2.5 kg), of which 350 g are reserved for payload.

The UAV is intended to lift off vertically from a tail-sitting position before transitioning to horizontal flight. It is to be powered by a lithium-ion or lithium polymer battery, giving the craft a 75 minute endurance, David Sharpin, CEO of Quantum-Systems Inc, a subsidiary of Germany’s Quantum-Systems GmbH, told Janes on 10 October at AUSA. The craft can be controlled up to 6.2 miles away from its control station, according to Quantum-Systems.

“[Twister] is in prototype phase and will continue with prototype phase through early next year,” said Sharpin.

Five Twisters are undergoing flight tests at the company's Munich, Germany factory, Sharpin said, testing different gimbal configurations and nosecones. The UAV is designed to carry two different electro-optic/infrared (EO/IR) sensors, the NextVision Nighthawk2-UZ and AVT Australia CM62 series.

“We probably have about 150 hours on this bird so far,” said Sharpin. “And that will increase as we go through the winter and the spring. We will probably have 1,000 hours total before we go to production.”

Twister is to be natively equipped with artificial intelligence (AI) capabilities using an Nvidia processor chip aboard the aircraft. Quantum-Systems announced a partnership with SightX AI to classify and warn operators about objects detected by the EO/IR sensors.

**9 . Date: 17-07-2023Armed ISR / ISTAR - HALE - General - PlatformAustralia to accelerate Ghost Bat developmentURL: https://www.janes.com/defence-news/air-platforms/latest/australia-to-accelerate-ghost-bat-development**

Australia's Department of Defence (DoD) has been directed by the government to accelerate development of the Boeing Australia MQ-28A Ghost Bat unmanned aerial vehicle (UAV), informed sources have disclosed to Janes.

According to the sources, the DoD has been told by Defence Minister Richard Marles to bring forward options “without delay” to develop the programme and support it in the production of Block 2 airframes.

The sovereign MQ-28A is being developed by Boeing Australia in partnership with the Australian government, and the acceleration of the programme was identified as a priority in the government's Defence Strategic Review (DSR), which was published in April. The first Ghost Bat aircraft made its maiden flight in February 2021.

Boeing Australia is already under contract to produce 10 MQ-28As for development and testing, four of which are reported to have flown.

Currently, development of the MQ-28A is continuing through systematic testing in both live and digital environments, including at the Woomera test range in South Australia.

During the current testing block, the MQ-28A has flown under the command of the ‘autonomous behaviour' laws of the mission system for the first time rather than being controlled from a Woomera ground control station, the sources reported.

Digital testing of the mission system continues, with more than 17,000 hours of testing conducted in a simulated combat environment. This is designed to assess the autonomous behaviours that will be refined in future live and virtual missions, the sources said.

**10 . Date: 23-04-2024Armed ISR / ISTAR - MALE - Contract - Chadian Air Force unveils Aksungur UAVURL: https://www.janes.com/defence-news/air-platforms/latest/chadian-air-force-unveils-aksungur-uav**

The Chadian Air Force (AAT) has revealed it has received at least one Turkish Aerospace (TUSAŞ) Aksungur unmanned aerial vehicle (UAV).

It released a video on 21 April that included footage of an Aksungur with AAT markings and the Turkish-format serial 23013 taking off from Adji Kosseï Air Base at N'Djamena International Airport armed with eight MAM-L small laser-guided bombs. The video also featured AAT personnel being trained by TUSAŞ in Türkiye.

The AAT operates at least two TUSAŞ Anka UAVs and three TUSAŞ Hürkuş-C turboprop light-attack aircraft, which were unveiled when President General Mahamat Idriss Déby Itno visited Adji Kosseï Air Base in July 2023.

Initially called the Anka-2, the Aksungur is a twin-engine aircraft with a maximum take-off weight of 3,300 kg with a payload of more than 750 kg, according to TUSAŞ, compared with the Anka's 1,700 kg weight with a 350 kg payload. The TUSAŞ brochure says the Aksungur has a 50-hour endurance, although the company suggested it has not achieved this yet when it announced in January that the aircraft had performed a 41-hour flight.

The AAT is the second-known Aksungur export operator after Kyrgyzstan's Border Guard Service, which displayed one along with a heavier Bayraktar Akıncı when President of Kyrgyzstan Sadyr Japarov visited its new UAV base at Issyk-Kul International Airport on 28 October 2023.

For more information on earlier delivery of Turkish aircraft, please seeChad confirms delivery of Hürkuş, Anka aircraft from Turkey .

**13 . Date: 20-07-2023Cargo - General - China repurposes commercial UAVs for military resupply missionsURL: https://www.janes.com/defence-news/air-platforms/latest/china-repurposes-commercial-uavs-for-military-resupply-missions**

The People's Liberation Army (PLA) has been modifying and using commercial unmanned aerial vehicles (UAVs) to support its logistics operations.

Video footage broadcast by state-owned China Central Television (CCTV) in early July shows the PLA Ground Force's (PLAGF's) 83rd Group Army using a repurposed commercial vertical take-off and landing (VTOL) quadcopter during a combat exercise to drop ammunitions to soldiers in a simulated battlefield environment.

Janes analysis showed that the UAV is also available for sale on a Chinese e-commerce platform. The platform indicates the UAV was built for agricultural spraying by a company based in the Jiangsu province.

The 83rd Group Army has installed a makeshift storage compartment – likely made of carbon fibre – below the central module of the UAV. The flaps at the bottom of the compartment open to drop supplies to deployed troops.

In the video footage, the UAV can be seen possibly dropping 7.62 mm calibre ammunitions for assault rifles used by the 83rd Group Army soldiers. Later on in the footage, the soldiers demonstrate loading the ammunitions into the payload compartment through a hatch on its side.

Janes analysis of the video indicates the UAV could weigh between 20 and 40 kg, have a width of about 1.5 m, and a maximum speed of 70 km/h.

The UAV has stable altitude correction settings and can transmit data to soldiers in real time. It can be operated using remote control or waypoint navigation from ground control stations.

The PLA has been increasingly leveraging commercial platforms to strengthen its operations as part of Beijing's ‘Military-Civil Fusion' (MCF) development strategy.

**14 . Date: 17-11-2023Armed ISR / ISTAR - Tactical - Contract - Edge announces Emirati UAV ordersURL: https://www.janes.com/defence-news/air-platforms/latest/edge-announces-emirati-uav-orders**

The United Arab Emirates (UAE) Armed Forces have ordered both Reach-S unmanned aerial vehicle (UAV) and Garmoosha rotary UAVs, local defence company Edge announced during the Dubai Airshow on 16 November.

It said the Reach-S order covers the delivery of 100 UAVs without specifying the value of the contract, while the contract for an unspecified number of Garmoosha UAVs is worth AED239 million (USD65 million).

Tawazun Council, which manages procurement for the UAE Armed Forces, appeared to confirm the Garmoosha order in its contract announcements on day four of the Dubai Airshow, saying one worth AED239 million had been awarded to ADASI, Edge's unmanned systems subsidiary, for helicopters it did not identify. It made no apparent reference to a Reach-S order.

The Garmoosha is listed as having a maximum take-off weight (MTOW) of 550 kg with a 120 kg payload, making it more than twice as heavy as the Schiebel S-100 rotary UAV currently used by the UAE Armed Forces.

Unveiled as a product of Edge's Halcon guided weapons subsidiary at the previous Dubai Airshow in 2021, the Reach-S has an MTOW of 600 kg with a 120 kg payload, making it slightly lighter than the class-leading Bayraktar TB2 made by Turkish company Baykar.

During this year's show, Edge said the UAV is being developed by ADASI and Advanced Concepts, a new subsidiary announced in February.

“We have successfully completed two flight tests and a weapon-release campaign for the Reach-S, and we are currently gearing up for a long-endurance flight test,” the Edge statement quoted Advanced Concepts senior vice-president Saeed al-Mansoori as saying.

**15 . Date: 17-05-2024Loitering Munition - Small - General - PlatformEdge unveils Hunter 5 loitering munition prototype in test videoURL: https://www.janes.com/defence-news/air-platforms/latest/edge-unveils-hunter-5-loitering-munition-prototype-in-test-video**

The United Arab Emirates' (UAE's) Edge Group has updated the product page for its Hunter 5 unmanned aerial vehicle (UAV) with a video showing its first test flight.

The video said the flight took place in November 2023 at the company's X Range testing facility on Abu al Abyad island. It showed a prototype fitted with fixed undercarriage and non-folding wings, having its two-cylinder petrol engine manually started before it took off and flew around the range's runway.

The promotional image of the Hunter 5 on the Edge website shows it with folding wings, no undercarriage, and a probable rocket booster for launching it from a rail or canister.

Edge says the Hunter 5 has a 3.6 m wingspan, a take-off weight of 50 kg, a 5 kg payload, and a communication range of 100 km. The video gave a different endurance for the munition than stated in the brochure, saying it is 150 not 180 minutes. The brochure attributes that shorter endurance to the Hunter 10, which is the same except it carries a larger 10 kg payload and less fuel.

Both types are designed to carry out reconnaissance and surveillance missions as well as act as expendable loitering munitions. It is unclear if they will be recoverable if they are not used in an attack.

The Hunter 5 and 10 were unveiled at the Dubai Airshow in November 2021, when the company displayed models showing two different types of aircraft. The Hunter 10 had a V-tail rather than the X-tail it now has, a less cylindrical body, non-folding wings, and an electric motor. The much smaller Hunter 5 looked like a hand-launched UAV.

**17 . Date: 17-01-2024Armed ISR / ISTAR - MALE - Contract - Ethiopia inducts new Su-30 fighters, Akinci UAVsURL: https://www.janes.com/defence-news/air-platforms/latest/ethiopia-inducts-new-su-30-fighters-akinci-uavs**

Ethiopia has received new Sukhoi Su-30 ‘Flanker' fighters and Baykar Bayraktar Akıncı armed unmanned aerial vehicles (UAVs).

The Ethiopian National Defense Force (FDRE Defense Force) reported the arrival of an undisclosed number of Su-30s on 16 January, with the state-owned Ethiopian Broadcasting Corporation (EBC) reporting the arrival of an undisclosed number of Akıncı UAVs on the same day.

“We will continue to be equipped with modern weapons that can defend our airspace from any attack,” Chief of General Staff of the FDRE Defense Force, Field Marshal Birhanu Jula, was quoted as saying in a post published on the force's official Facebook account. “The FDRE air force has equipped [itself with] the most modern first round Su-30 fighter jets and [Akıncı] strategic unmanned [aircraft].”

Images posted by the FDRE Defense Force showed two twin-seat Su-30 aircraft (tail numbers 2401 and 2402) in a desert-style camouflage paint scheme parked alongside what are likely existing Ethiopian Air Force (ETAF) Su-27 aircraft in an air defence blue camouflage scheme. As 2401 and 2402 are the subject of the images posted by the FDRE Defense Force, it is probable that these are the two new jets.

**19 . Date: 28-07-2023Armed ISR / ISTAR - MALE - General - PlatformIDEF 2023: GIDS details Shahpar III UAVURL: https://www.janes.com/defence-news/air-platforms/latest/idef-2023-gids-details-shahpar-iii-uav**

Pakistan's state-owned defence conglomerate Global Industrial & Defence Solutions (GIDS) revealed further details of its new medium-altitude long-endurance (MALE) unmanned aerial vehicle (UAV) – Shahpar III – at the 16th International Defence Industry Fair (IDEF) held in Istanbul from 25 to 28 July.

GIDS displayed a model of the Shahpar III at the exhibition and according to company information, the aircraft features enhanced endurance, weapon carriage capacity, and service ceiling over the earlier platforms in the Shahpar family of UAVs. The Shahpar III will have a maximum take-off weight of 1,650 kg and can carry multiple weapons on six underwing hardpoints. It will feature domestically developed avionics and be equipped with a dual-redundant flight control computer (1553 architecture), enhancing the aircraft's reliability.

Speaking to Janes, an official from GIDS said the development of Shahpar III is ongoing with a maiden flight planned towards the end of 2023.

The Shahpar III design features a central fuselage equipped with shoulder-mounted high aspect ratio trapezoidal wings with a span of 64 ft. The fuselage has a bulbous nose section to accommodate satellite communication (satcom) equipment and antenna for beyond-line-of-sight (LOS) communication up to 3,000 km. The LOS range of Shahpar III is given as 300 km. The UAV also features a chin-mounted common sensor payload turret and a ground datalink antenna in the underbelly section. It will have an internal payload carrying capacity of 165 kg, according to GIDS.

**20 . Date: 28-07-2023ISR / ISTAR - Small / Tactical - Contract - IDEF 2023: Sentian Aerospace secures customer for UAVsURL: https://www.janes.com/defence-news/air-platforms/latest/idef-2023-sentian-aerospace-secures-customer-for-uavs**

South Africa-based Sentian Aerospace has received an order for its Xplorer and Xtension small unmanned aerial vehicles (UAVs) from an undisclosed African customer, the company's CEO, Muzi Dube, told Janes at the 16th International Defence Industry Fair (IDEF) held in Istanbul from 25 to 28 July.

Dube said both UAVs are production-ready and added that they use a similar airframe design but differ in their size and performance characteristics. The UAVs are designed to provide cost-effective solutions for missions including intelligence, surveillance, target acquisition, and reconnaissance (ISTAR); search and rescue; medical resupply; mapping; aerial survey; and scientific roles, Dube added.

The UAVs have a modular payload arrangement, enabling a range of missions without compromising the performance characteristics of the aircraft. Sentian Aerospace UAVs are integrated with the Shuri artificial intelligence (AI) system developed by Raphta, a South African software development firm, Dube said.

Among the payloads that the aircraft can carry are medical samples in a climate-controlled transport box that can be integrated in the fuselage, high-definition electro-optical/infrared sensor payloads, light detection and ranging (LIDAR), a particulate detector, multispectral cameras, and mapping cameras. Both UAVs can be fitted with extra fuel tanks to provide extended endurance.

The UAVs have a fixed tricycle landing gear arrangement for conventional take-off and landing from paved runways. The wing structure is also stressed out for the carriage of munitions and external payloads. As an option, vertical take-off and landing (VTOL) pylons can be attached to the wing hardpoints.

**21 . Date: 23-02-2023ISR / ISTAR - MALE - General - PlatformIDEX 2023: Schiebel develops Camcopter S-300URL: https://www.janes.com/defence-news/air-platforms/latest/idex-2023-schiebel-develops-camcopter-s-300**

Schiebel Corporation has detailed the development of a larger variant of its Camcopter S-100 unmanned aerial vehicle (UAV) at IDEX 2023, being held in Abu Dhabi from 20 to 24 February.

The Camcopter S-300, a larger variant of the S-100, is designed to meet the requirements of customers seeking extended range, higher endurance, and enhanced payload-carrying capabilities.

Schiebel's chairman, Hans Georg Schiebel, told Janes that “Schiebel started the development of the S-300 to provide heavylift solution for land and maritime domains, perform better anti-submarine warfare operations, and have scope to integrate various types of radars”.

The new vertical take-off and landing (VTOL)-capable S-300 is intended for intelligence, surveillance, and reconnaissance (ISR) operations for civil, governmental, and military organisations.

The S-300 is fitted with multiple hardpoints for flexible payload installationwith a capacity of up to 250 kg, while using the same ground control station and payload fits of the S-100, Schiebel said.

The S-300 has a maximum take-off weight of 660 kg, internal payload capacity (including fuel weight) of 340 kg, and internal fuel tank capacity of 300 litres. It has a datalink range of up to 200 km and an endurance of up to 24 hours and 4 hours with 50 kg and 250 kg payloads, respectively.

**23 . Date: 17-08-2023ISR / ISTAR - MALE - General - PlatformIndian Air Force inducts Heron Mk IIURL: https://www.janes.com/defence-news/air-platforms/latest/indian-air-force-inducts-heron-mk-ii**

The Indian Air Force (IAF) has inducted four Israel Aerospace Industries (IAI) Heron Mk II medium-altitude, long-endurance (MALE) unmanned aerial vehicles (UAVs) for surveillance operations in India's northern sector, which has borders with both China and Pakistan, a senior officer of the service told Janes on 14 August.

The officer confirmed that the four Heron Mk II units will be equipped with long-range observation sensors and radars, and carry additional payloads related to electronic support measures (ESM), communications intelligence (COMINT), electronic intelligence (ELINT), and communication relay.

Developed by IAI, the Heron Mk II has a length of 8.5 m, wingspan of 16.6 m, and a payload capacity of 490 kg. According to company specifications, the UAV has a maximum take-off weight of 1,430 kg, an endurance of 45 hours, service ceiling of 35,000 ft, and a maximum speed of 150 kt.

Janes reported in October 2022 that discussions were under way for a proposal to manufacture the Heron Mk II in India under licence, possibly in collaboration with state-owned Hindustan Aeronautics Limited (HAL). At the time, IAI was in the process of delivering a batch of the Heron Mk II – an estimated 10 units – to the IAF and the Indian Army.

IAI said the Heron Mk II is used by the Israeli Air Force and more than 20 other organisations worldwide.

**24 . Date: 09-02-2023Requirement - Indonesia seeks foreign lenders for UCAV programmesURL: https://www.janes.com/defence-news/air-platforms/latest/indonesia-seeks-foreign-lenders-for-ucav-programmes**

The Indonesian Ministry of Finance (MoF) has approved a request from the Indonesian Armed Forces (TNI) to procure unmanned combat aerial vehicles (UCAVs) with foreign loans, and the country is evaluating suitable lenders for this.

The UCAVs are part of a list of 16 programmes for the year for which permission to take on foreign loans has been granted by the MoF, provided that the formal contracts are signed with the Ministry of Defense (MoD) by 31 December 2023, documents provided to Janes indicate.

Approvals to procure the unmanned vehicles have been granted separately for each of the three armed services and include provision for UCAV-mounted munitions.

For the Indonesian Air Force (TNI-AU), the MoF has allowed a loan quantum of up to USD200 million to procure UCAVs and a limit of USD38.115 million for UCAV-mounted munitions.

There are no indications as to the type of unmanned aerial vehicles (UAVs) that can be acquired, but for the munition, the documents listed specifically that the TNI-AU should procure MAM-L lightweight smart missiles, in apparent reference to the Roketsan's line of small guided bombs that go by the same name.

For the Indonesian Navy (TNI-AL), a loan quantum of up to USD100 million has been granted. The service has also been given permission to take on up to USD10.89 million to acquire UCAV-mounted munitions, and like the TNI-AU, these should be the MAM-L missiles.

**25 . Date: 04-07-2023Loitering Munition - Mini - General - PlatformIran displays Warmate-type loitering munitionURL: https://www.janes.com/defence-news/air-platforms/latest/iran-displays-warmate-type-loitering-munition**

The Islamic Republic of Iran Army Ground Forces displayed an unmanned aerial vehicle (UAV) that looks like the WB Group's Warmate loitering munition at an exhibition that opened on 2 July.

Media coverage of senior officers visiting the exhibition showed the UAV with a small camera embedded in an interchangeable warhead mounted on its nose, like the Warmate, albeit with a more prominent antenna for controlling it from the ground than the Polish original.

Iranian sources identified the weapon as the Zhubin, which was reported to be one of the weapons displayed at the exhibition.

The Zhubin was also reported to be one of the UAVs used by the Islamic Republic of Iran Navy during an exercise in July 2022. Photographs of that event showed what appeared to be a Warmate-type UAV being launched from submarines.

The Polish-made Warmate, its launcher, datalink antenna, and control console are designed to be carried and deployed by a two-person team. The UAV has a take-off weight of 5.7 kg, which includes a high-explosive or a thermobaric warhead, and a radio-control range of 30 km.

The Zhubin was displayed next to a small vertical take-off UAV that was identified by a poster as the Yazdan-3. This has been seen earlier in Iranian military parades and exercises but has not been officially identified, with Tasnim News Agency earlier identifying it as the Chamroosh-3.

**26 . Date: 06-12-2023Armed ISR / ISTAR - MALE - General - Italy flies first Block 5 ReaperURL: https://www.janes.com/defence-news/air-platforms/latest/italy-flies-first-block-5-reaper**

The Italian Air Force (Aeronautica Militare Italiana: AMI) has flown its first Block 5 version of the General Atomics Aeronautical Systems Inc (GA-ASI) MQ-9A Reaper unmanned aircraft system (UAS).

The manufacturer announced the milestone on 5 December, saying the first flight of the remotely piloted aircraft (RPA) took place some weeks earlier on 9 November.

“The new RPA was delivered to the [AMI], along with a new mobile ground control station (MGCS), as part of a mid-life modernisation (MLM) update to the [Italian] fleet of RPAs from GA-ASI. The aircraft and MGCS are part of a Foreign Military Sales,” General Atomics said.

The Block 5 improves on earlier versions of the Reaper in that it provides a significant increase in electrical power generation, auto take-off and landing capability with improved landing gear and datalinks, and features the latest version of the GA-ASI Lynx multimode radar.

The AMI originally received six MQ-9A Reaper unmanned aircraft, one of which was lost over Libya in November 2019. With one of the remaining five now upgraded to Block 5 standard, the other four will be retrofitted to the same configuration as well.

The type is operated by the AMI's 32° Stormo (Wing) based at Amendola in southern Italy.

**27 . Date: 20-01-2023Cargo - MALE - General - Kaman to close K-MAX production lineURL: https://www.janes.com/defence-news/air-platforms/latest/kaman-to-close-k-max-production-line**

Kaman Corporation announced it will end the K-MAX production line, citing “low demand and variation in annual deliveries, coupled with low profitability and large working capital inventory requirements”, according to an 18 January statement.

The line is scheduled to close in the first quarter of the fiscal year (FY) 2023, after a 60-platform production run of the specialised cargo helicopter.

In 2010, the US Marine Corps (USMC) purchased two K-MAXs, modified by Lockheed Martin to be optionally manned and designated CQ-24A. From 2011 to 2014, the USMC deployed the K-MAXs to southern Afghanistan, where they flew thousands of resupply missions to deliver 4.5 million lb (2.04 million kg) of cargo to isolated outposts, according to Lockheed Martin.

Though retired after their return from Afghanistan, the USMC reactivated the K-MAXs in 2021 “to support future unmanned efforts”, said Kaman at the time.

The USMC had not responded to Janes questions on K-MAX at the time of publication.

Kaman continues to produce the Kargo unmanned aerial vehicle (UAV), a fully unmanned quadcopter. In October 2022, the USMC purchased a prototype Kargo vehicle under the Medium Unmanned Logistics Systems-Air (MULS-A) programme.

**28 . Date: 26-05-2023Armed ISR / ISTAR - MALE - Contract - LIMA 2023: Malaysia orders three TAI AnkasURL: https://www.janes.com/defence-news/air-platforms/latest/lima-2023-malaysia-orders-three-tai-ankas**

The Malaysian government has announced a contract with Turkish Aerospace Industries (TAI) for three Anka multirole unmanned aircraft systems (UASs). The Anka (Phoenix) is a medium-altitude long-endurance (MALE) UAS that is capable of intelligence, surveillance, and reconnaissance (ISR), electronic warfare (EW), and combat operations.

The Malaysian Ministry of Defense (MINDEF) announced the contract on 25 May during the Langkawi International Maritime and Aerospace (LIMA) Exhibition 2023 held from 23 to 27 May.

The MINDEF said in its announcement that the value of the contract is MYR423.8 million (USD91.6 million) and that the aircraft would support the Royal Malaysian Air Force (RMAF) and the Royal Malaysia Police (RMP) operations. The MINDEF added that these aircraft comprise Phase 1 of the acquisition.

A spokesperson from TAI added that the contract value includes the three aircraft and the control station. The RMAF will operate the aircraft.

The acquisitions are intended to sustain the RMAF's Capability Development Plan 2055 (CAP55). The plan aims to transform the RMAF into a “full spectrum” force and includes the incorporation of one squadron with MALE UAS.

An RMAF spokesperson told Janes that the CAP55 calls for the acquisition of as many as nine MALE UASs across three phases. “Each phase is intended to acquire three aircraft,” the spokesperson said.

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**29 . Date: 08-06-2023Armed ISR / ISTAR - Tactical - General - PlatformMADEX 2023: LIG Nex1 unveils Multi-Purpose Unmanned HelicopterURL: https://www.janes.com/defence-news/air-platforms/latest/madex-2023-lig-nex1-unveils-multi-purpose-unmanned-helicopter**

LIG Nex1 has displayed a model of its new Multi-Purpose Unmanned Helicopter (MPUH) at the MADEX 2023 exhibition in Busan.

The South Korean firm said the vertical take-off and landing (VTOL) unmanned aerial vehicle (UAV) has a length of 3.5 m and an operating range of more than 50 km. It has a maximum take-off weight of 200 kg with a payload of 60 kg.

The MPUH is fitted with an electro-optic/infrared pod and a front-facing camera for reconnaissance. It has a service ceiling of 2,500 m and a maximum speed of 140 km/h. The aircraft has an endurance of six hours.

LIG Nex1 said the small and compact design of the MPUH enables the aircraft to be launched from small landing pads. The aircraft is powered by a 60 hp engine built by Austrian firm Austro, although the specific type has not been disclosed.

The company said the MPUH is designed for missions including transport, reconnaissance, and surveillance. Janes understands that it can also be fitted with additional payloads for anti-submarine warfare missions.

**30 . Date: 29-06-2023Solar ISR / ISTAR - HALE - General - PlatformModern Day Marine 2023: US DoD backs AeroVironment solar UAV effortURL: https://www.janes.com/defence-news/air-platforms/latest/modern-day-marine-2023-us-dod-backs-aerovironment-solar-uav-effort**

The US Department of Defense (DoD) recently awarded a contract to support the development of AeroVironment's high-altitude, solar-powered unmanned aerial vehicle (UAV), according to officials at the US-based company.

The contract is the DoD's first for Sunglider, which has mainly been described as a commercial effort. AeroVironment envisions fielding a network of long-endurance UAVs to provide global internet service. Flying at an altitude of about 65,000 ft (19,812 m), the fixed-wing aircraft will also be capable of carrying sensors.

AeroVironment is “actively pursuing multiple other defence opportunities” for Sunglider, also known as the High-Altitude Pseudo-Satellite (HAPS), AeroVironment chairman, president, and CEO Wahid Nawabi told analysts during a 27 June earnings call. “Given the current conflicts around the world, we believe that the defence market for HAPS represents a multibillion-dollar long-term growth opportunity.”

In a 28 June interview at the Modern Day Marine event in Washington, DC, Charlie Dean, AeroVironment vice-president of global business development and marketing, declined to disclose the amount of the contract, how the money will be specifically used, or which DoD entity awarded the contract. A DoD spokesperson had no immediate comment at the time of publication.

Sunglider has been in development since 2017 and flew for the first time in 2019. Dean said AeroVironment is developing a new version of Sunglider and expects to begin flying it within a year. “You could imagine systems like this being deployed in the next couple of years,” he told Janes .

**32 . Date: 21-12-2023ISR / ISTAR - Mini - Contract - New Zealand Army to receive new unmanned systemsURL: https://www.janes.com/defence-news/air-platforms/latest/new-zealand-army-to-receive-new-unmanned-systems**

The New Zealand Ministry of Defence (MoD) announced on 14 December that it has awarded contracts to three companies for small, micro, and nano unmanned aircraft systems (UASs).

Sarah Minson, deputy secretary for Capability Delivery at the MoD told Janes that EPE New Zealand Limited (EPE) will supply the Skydio X-series of quadcopter micro UAS and the Flexnet Remote Ground System (RGS) from Bertin Exensor.

Meanwhile, Quantum Systems Inc would supply its Vector fixed-wing remotely piloted aerial system (RPAS) while Criterion Solutions will supply the Teledyne Black Hornet nano UAS.

“The first deliveries will be from 2024,” she said, but the total number of units to be procured in each category and the contract values could not be disclosed for operational reasons.

The contracts were awarded in September and October 2023 following a request for proposal (RFP) that was released in May 2022. These called for two to four fixed-wing UASs, 18–30 micro RPASs, and 30–40 nano UASs.

The Skydio X2D UAS has a ruggedised frame and is equipped with six 4K navigation cameras providing 360° obstacle avoidance and a dual-sensor payload including a 12 megapixel colour camera and FLIR 320×256 thermal sensor. The MoD stated that the Skydio X2D UAS can be operational in less than 75 seconds.

EPE is also providing the Flexnet RGS, which Exensor states comprises a handheld tablet or personal digital assistant (PDA), and a couple of sensors and cameras in its smallest form. These are used to protect military personnel or small critical assets.

**33 . Date: 27-03-2023Armed ISR / ISTAR - MALE - General - Northrop Grumman sees bright future for MQ-8 despite US Navy divestmentsURL: https://www.janes.com/defence-news/air-platforms/latest/northrop-grumman-sees-bright-future-for-mq-8-despite-us-navy-divestments**

Despite the US Navy's (USN's) recent cuts, entirely divesting the MQ-8B and cutting the follow-on MQ-8C fleet to eight operational helicopters, Northrop Grumman anticipates a bright future for the Fire Scout unmanned aerial vehicle (UAV).

Both Northrop Grumman and the USN are focused on expanding the MQ-8's role. The helicopter was built to give Littoral Combat Ships (LCSs) an intelligence, surveillance, and reconnaissance (ISR) capability, using its Forward Looking InfraRed (FLIR) Systems Brite Star II electro-optical payload and Leonardo Aperture radar to remotely detect targets and threats. The data from these sensors is sent back to the ship and distributed from there, but the USN has of late stressed on feeding data into a digital cloud and distributing it immediately and widely to provide a common operation picture for any forces in the region.

“We are constantly making improvements to the system,” Lance Eischeid, Northrop Grumman's MQ-8 programme manager, told Janes . “[One thing] on our road map is a datalink that will allow [the USN] to share the sensor tracks and data with other users. Right now, we have a tactical datalink that pipes our sensor data back to the control station on the ship. But we want to be able to broadcast that to other air assets and other ships so that sensor data can be utilised for any shooter.”

The company is exploring the use of satellite communications (satcom). While current use is limited to line-of-sight communications with the host ship, limiting the UAV's operational range to roughly 150 nm, satcom could extend its useful range to 600 nm or more.

**35 . Date: 17-05-2024Armed ISR / ISTAR - MALE - General - Poland completes receipt of Turkish UAVsURL: https://www.janes.com/defence-news/air-platforms/latest/poland-completes-receipt-of-turkish-uavs**

Poland has received the last of 24 Baykar Bayraktar TB2 armed unmanned aerial vehicles (UAVs) from Türkiye.

The Polish Armaments Agency (AA) announced the milestone on 16 May, saying that the last four unmanned aircraft systems (UASs), each comprising six UAVs, had been received into the 12th Unmanned Aerial Vehicle Base at Mirosławiec on the same day.

“The Secretary of State in the Ministry of National Defense, Paweł Bejda, together with representatives of the Polish Armed Forces, took part in the ceremony of completing the delivery of the last, fourth set of the Bayraktar TB2 unmanned reconnaissance and strike system,” the AA said.

News of the milestone came three years after the deal between the Armament Inspectorate and Baykar Makina Sanayi ve Ticaret was first disclosed in May 2021, and one-and-a-half years after deliveries to Poland commenced in late 2022. The first instructors and operators from the 12th Unmanned Aerial Vehicle Base and the Engineering and Aviation Training Center in Dęblin began training on the system at the end of 2023.

As well as the UAVs which are fitted with electro-optic/infrared (EO/IR) sensors, synthetic aperture radars, and weapons, each UAS comprises three ground control stations (GCSs) and spares. As noted by the AA, the weapons package for the TB2 includes laser-guided MAM-L thermobaric and MAM–C high-explosive Smart Micro Munitions, as well as training munitions from Roketsan.

The deal also included some technology transfer, with the Polish Ministry of National Defence (MND) saying that Polish industry would gain capabilities in engine overhaul and repair, and maintenance of the GCSs and EO/IR sensors.

**36 . Date: 22-02-2024General - Portuguese Navy establishes multidomain drone unitURL: https://www.janes.com/defence-news/air-platforms/latest/portuguese-navy-establishes-multidomain-drone-unit**

As part of its ambitious effort to widen the use of unmanned systems, the Portuguese Navy has established a squadron-sized unit for the operation of military-grade unmanned systems.

The new unit, called ‘X31', was officially stood up on 9 February. It is subordinated to naval command and will be responsible for operating current and future unmanned surface, subsurface, and air systems, as well as co-ordinating doctrine development and training activities, an industry source told Janes .

The creation of X31 follows an ambitious strategy by the navy to acquire unmanned systems for different missions and applications, develop unmanned systems in-house, and simultaneously support the local defence technological and industrial base.

The Portuguese Navy has acquired a wide range of unmanned systems in recent years, including unmanned aerial vehicles (UAVs) such as UAVision Aeronautics' Spyro 4N and OGS42N/VN, Beyond Vision's VTOne and HEIFU Pro, and Autel Robotics' EVO II Dual 640T Enterprise V2 and EVO Nano; the LSTS' Seacon-3 unmanned underwater vehicle (UUV); and a shelter-based deployable ground control station.

In the search to later acquire unmanned systems for maritime surveillance missions, the service is currently evaluating the Unmanned Oceanic Patrol Vessel (UOPV) prototype developed by TecnoVeritas and Nautiber.

The navy established the Unmanned Vehicles Operational Experimentation Cell (Célula de Experimentação Operacional de Veículos Não Tripulados: CEOV) in October 2017 to develop and experiment with unmanned technologies.

**37 . Date: 21-11-2023Armed ISR / ISTAR - MALE - Regulation - RAF expects to fly Protector in civil airspace from 2024URL: https://www.janes.com/defence-news/air-platforms/latest/raf-expects-to-fly-protector-in-civil-airspace-from-2024**

The UK Royal Air Force (RAF) expects to be able to fly the General Atomics Aeronautical Systems Inc (GA-ASI) MQ-9B Protector RG1 medium-altitude long-endurance (MALE) unmanned aerial vehicle (UAV) in civil controlled airspace from 2024, the Ministry of Defence (MoD) told Janes on 21 November.

Answering a question days after the first Protector flew its maiden UK flight over the type's future home operating base of RAF Waddington in Lincolnshire, the MoD said it is now waiting on the military certification that is needed before the unmanned aircraft can operate as required throughout the country and beyond.

“The programme is looking to obtain a Military Type Certificate from the MAA [Military Aviation Authority] next year,” the MoD said. “Until Protector is certified, it will only be able to operate in segregated airspace, however, this will not be confined to [the airspace above RAF] Waddington.”

On 17 November the MoD announced that the first of 16 Protectors to be delivered to RAF Waddington had flown the type's first sortie in national airspace, with the aircraft flying within the confines of the base and under the control of a pilot on the ground.

**38 . Date: 23-02-2024Cargo - Tactical - Contract - Royal Marines, Japan acquires T-150 UAVs from Malloy AeronauticsURL: https://www.janes.com/defence-news/air-platforms/latest/royal-marines-japan-acquires-t-150-uavs-from-malloy-aeronautics**

The T-150 unmanned aerial vehicle (UAV) manufactured by UK-based company Malloy Aeronautics has been acquired by the Royal Marines and Japan, UK's Minister for Defence Procurement James Cartlidge announced to Janes and other media representatives on 22 February.

Speaking at the Defence Drone Strategy launch at Malloy Aeronautics factory, Cartlidge said that 22 T-150 quadcopters have been acquired by the Royal Marines and two by Japan for experimentation.

Cartlidge told Janes that the Royal Marines acquired the platforms under a direct acquisition.

Malloy Aeronautics' UAVs have participated in a number of competitions and trials, including UK initiatives ‘Uncrewed Air Systems Heavy Lift Capability' and ‘Multi-Domain Integrated Swarm' as well as the multinational annual Exercise ‘REPMUS' (Robotic Experimentation and Prototyping using Maritime Unmanned Systems). During ‘REPMUS', the company integrated an inert Sting Ray training variant torpedo on the T-600 heavy lift UAV.

An undisclosed number of T-150 UAVs have been sent to Ukraine as part of a military support package announced in May 2022. Cartlidge confirmed to Janes that more are being sent to Ukraine under the latest GBP200 million (USD253 million) ‘drone' package announced in January 2024.

The T-150 is a heavy lift UAV capable of carrying payloads weighing up to 68 kg from distances up to 70 km. The platform has been resupplying Ukrainian units across the Dnieper river, Cartlidge noted.

Malloy Aeronautics was acquired and merged into BAE Systems FalconWorks in February 2024.

**39 . Date: 26-02-2024ISR / ISTAR - Small - General - PlatformSingapore Airshow 2024: ST Engineering debuts its DrN-35DH multirotor UASURL: https://www.janes.com/defence-news/air-platforms/latest/singapore-airshow-2024-st-engineering-debuts-its-drn-35dh-multirotor-uas**

Singapore's ST Engineering displayed its DrN-35DH unmanned aircraft system (UAS) at the Singapore Airshow 2024 held from 20 to 25 February.

The DrN-35DH is an intelligence, surveillance, and reconnaissance (ISR)-capable hexacopter and is a larger derivative of the company's in-production DrN-15 unmanned aerial vehicle (UAV).

According to the company, the DrN-35DH features improved safety and precise location-tracking capability compared with the DrN-15 enabling the UAS to operate in ‘high-risk' or densely populated environments.

The UAS features six arms primarily constructed of carbon fibre composite material. The propulsion system comprises six electric motors mounted at the end of each arm and each motor drives a two-bladed composite propeller.

The UAS has a maximum take-off weight of 37 kg, a maximum payload capacity of 5 kg, a maximum endurance of 37 minutes, and a maximum range of 15 km. The UAS can fly up to a maximum speed of 10 m/s and can sustain flying in windspeeds up to 10 m/s.

In terms of its payload, the UAS carries two cameras, a primary electro-optic/infrared (EO/IR) camera mounted at the rear and a backup camera mounted at the front. The backup camera is primarily to aid in landing operations in case the primary camera fails. Both the cameras are gimbal mounted. A light detection and ranging (LIDAR) sensor is also mounted at the front of the UAS as an anti-collision system.

The development of the DrN-35DH UAS began in 2016 and it was given a permit to operate in beyond-visual line-of-sight (BVLOS) mode in 2019. The permit was the first to be obtained by ST Engineering and the first in Singapore.

**40 . Date: 28-07-2023ISR / ISTAR - Small / Tactical - General - PlatformSkyhawk Aerospace reveals Pushpak and C35-E UAVsURL: https://www.janes.com/defence-news/air-platforms/latest/skyhawk-aerospace-reveals-pushpak-and-c35-e-uavs**

India-based Skyhawk Aerospace showcased its indigenously designed fixed-wing vertical take-off and landing (VTOL) multirole Pushpak and C35-E unmanned aerial vehicles (UAVs) at the 4th Drone International Expo held in Delhi on 26 and 27 July.

The Pushpak is a tactical UAV designed to conduct high-altitude cargo operations. The UAV features a skid landing gear system and can fly up to a maximum altitude of 5,700 m in what company CEO Jayesh A described as “near gale conditions” and at temperatures between -30° C and +55° C.

Speaking to Janes , Jayesh said, “The development of the UAV started in November 2020 primarily to support cargo operations based on the inputs given by [the] Army Design Bureau (ADB).”

The design of the Pushpak includes shoulder-mounted moderately tapered straight wings spanning a length of 6.28 m, a twin-boom-mounted tail that has vertical stabilisers joined by a horizontal stabiliser at the top, and a hook placed beneath the fuselage near the wing section to carry the cargo.

The UAV has twin booms in the inner wing section ending in the tail and each of these is fitted with four electrically powered rotors (two upwards and two downwards), which enable VTOL operations. Forward flight is enabled by a pusher propeller driven by an 80 hp turboshaft engine with a total fuel capacity of 20 litres. The engine is being imported from a European manufacturer with time between overhauls of around 1,000 hours.

**42 . Date: 15-06-2023Armed ISR / ISTAR - HALE - General - PlatformTurgis & Gaillard to showcase France's largest unmanned aircraft at Le BourgetURL: https://www.janes.com/defence-news/air-platforms/latest/turgis-gaillard-to-showcase-frances-largest-unmanned-aircraft-at-le-bourget**

The Turgis & Gaillard group will be presenting the prototype of its Aarok unmanned aerial vehicle (UAV) at the Paris Air Show, held from 19 to 25 June. With a wingspan of 22 m, the Aarok is the largest UAV designed in France.

The Turgis & Gaillard group, named after its two founders, has been working on the Aarok project since 2020. The aircraft – designed for intelligence, surveillance, and reconnaissance (ISR), communication relay, and strike – will have an empty weight of around 2.5 ton and a 5.5 ton maximum take-off weight. The 3 ton payload will be divided between fuel (two ton in the fuselage and one ton in the wing), sensors, and weapons.

Thanks to its size and payload capacity, the Aarok will be able to simultaneously operate a large optronic payload (likely the Wescam MX25 or the Euroflir 610), a multimode radar, and an electronic intelligence (ELINT) payload.

With the radar in a central position under the fuselage, the aircraft will be able to carry a twin-munitions pylon on each of the inner wing hardpoints, an air-to-surface missile on each of the fairings of the main landing gear, and three light air-to-surface missiles under each outer half-wing hardpoint.

**43 . Date: 29-12-2023Armed ISR / ISTAR - HALE - General - PlatformTurkey flies Anka 3 UCAVURL: https://www.janes.com/defence-news/air-platforms/latest/turkey-flies-anka-3-ucav**

The Turkish Aerospace (TA) Anka 3 flying-wing unmanned combat aerial vehicle (UCAV) made its maiden flight on 28 December.

The flight over Ankara lasted for 70 minutes, during which the UCAV reached a height of 8,000 ft and a speed of 150 kt.

The existence of a low-observable, jet-powered UCAV was first made public in December 2022. The first taxi tests were performed in April 2023.

According to TA, the maximum take-off weight of the Anka 3 is 6.5 tons. The UCAV has a service ceiling of 44,000 ft and an endurance of10 hours at 30,000 ft. The top speed is 425 kt, and its cruise speed is 250 kt. The prototype of the Anka 3 is powered by a low-bypass turbofan engine.

The Anka 3 can carry 650 kg of munitions on each of the two internal weapon stations, or 650 kg on the inner and 100 kg on the outer underwing stations, for when stealth is not required. The UCAV will be able to carry a variety of smart or general-purpose bombs, guided ammunition, and missiles.

TA states that the Anka 3 uses the same ground systems as its earlier Anka and Aksungur unmanned aerial vehicles (UAVs) for increased commonality.

**44 . Date: 23-02-2024Requirement - UK launches Defence Drone StrategyURL: https://www.janes.com/defence-news/air-platforms/latest/uk-launches-defence-drone-strategy**

The UK unveiled its Defence Drone Strategy on 22 February to accelerate the adoption and development of unmanned systems across air, sea, and land for the armed forces.

Backed by GBP4.5 billion (USD5.6 billion) worth of investment over the next decade, the strategy aims to enable rapid experimentation and development of unmanned systems, unify the front-line commands approach, and promote collaboration with industry, Minister for Defence Procurement, James Cartlidge, told Janes and other media representatives at the strategy launch event in Maidenhead.

As part of this investment, the UK Ministry of Defence (MoD) will seek to harness unmanned systems in areas pertaining to naval mine warfare clearance, one-way attack, heavy lift, and intelligence and surveillance, the strategy detailed. When pressed about which area is considered a top priority, especially regarding unmanned aerial vehicles (UAVs), Cartlidge told Janes they “don't have a specific list yet”.

He continued by saying that “drones have revolutionised warfare” in Ukraine, inspiring the creation of the strategy. The MoD will continue to draw lessons from this conflict to stimulate innovation and production for the front-line commands, co-ordinated and integrated by Strategic Command, to bolster “the mass, lethality, and survivability of our own armed forces”, he added.

**45 . Date: 05-10-2023Armed ISR / ISTAR - MALE - General - Ukraine conflict: Aarok UAV to be built in UkraineURL: https://www.janes.com/defence-news/air-platforms/latest/ukraine-conflict-aarok-uav-to-be-built-in-ukraine**

The Ukrainian government has agreed with the Turgis & Gaillard group to the in-country production of its Aarok unmanned aerial vehicle (UAV).

Signed as part of a wider raft of defence co-operation agreements between Ukraine and its allies, the Aarok production deal will see the French manufacturer and Antonov team on production of the medium-altitude long-endurance (MALE) UAV.

French newspaper La Tribune reported the development on 4 October, quoting Turgis & Gaillard founder Fanny Turgis.

First revealed at the Paris Air Show in June, the Aarok is the largest UAV designed in France. With a wingspan of 22 m and a maximum take-off weight of 5.5 tonne (of which 3 tonne is payload), the UAV is designed for intelligence, surveillance, and reconnaissance (ISR), communication relay, and strike.

Payloads include the Safran's Euroflir 610 electro-optical/infrared (EO/IR) sensor, as well as the Sagem SBU-54 Hammer AASM (Armement Air-Sol Modulaire) precision-guided bomb, and other air-to-surface munitions.

Company performance figures give the Aarok a cruise speed of 287 mph and a cruise altitude of 30,000 ft. Earlier in 2023 Turgis & Gaillard said it was preparing for the first flight later in the year or early 2024.

**46 . Date: 03-08-2023Loitering Munition - Mini - Partnership - Ukraine conflict: Belarus seeking to manufacture Iranian weaponsURL: https://www.janes.com/defence-news/air-platforms/latest/ukraine-conflict-belarus-seeking-to-manufacture-iranian-weapons**

Belarus is likely seeking to establish an indigenous Iranian Shahed loitering munition production facility, the Institute for the Study of War (ISW) said on 31 July.

Belarusian Defence Minister Lieutenant General Viktor Khrenin and his Iranian counterpart Brigadier General Mohammad Reza Ashtiani met in Iran on 31 July to sign a memorandum of understanding (MOU) and a bilateral military co-operation plan. The negotiation likely involved discussing weapon deals including establishing a production facility for Shahed loitering munitions in Belarus.

This followed reports from the Ukrainian National Resistance Centre in May that an Iranian delegation, purportedly organised by Russian intelligence services, was in Belarus to assess the possibility of adapting local factories to produce Iranian munitions. Iranian engineers are considering converting a plant in Gomel, Belarus, the centre added.

Belarus, under President Aleksandr Lukashenko, has partly facilitated both the logistics and conduct of Russia's war in Ukraine, including providing Russia with ammunition from Belarusian stocks and exporting Western-origin components and goods to support the Russian defence industry. This partnership, along with Russia's relationship with Iran, has strengthened since the Ukraine conflict in part because of Western sanctions targeting and limiting Russia's ability to source large quantities of components necessary for producing military hardware. This has forced them to source platforms and ammunition from partners such as Iran and North Korea.

**47 . Date: 19-04-2023Armed ISR / ISTAR - MALE - General - PayloadUK Reaper shown carrying new undisclosed sensor payloadURL: https://www.janes.com/defence-news/air-platforms/latest/uk-reaper-shown-carrying-new-undisclosed-sensor-payload**

The UK Ministry of Defence (MoD) has released imagery of the General Atomics Aeronautical Systems, Inc (GA-ASI) MQ-9A Reaper unmanned aerial vehicle (UAV) fitted with a previously undisclosed new payload.

Released on 18 April to coincide with a media event at the Royal Air Force (RAF) Waddington marking 10 years of UK-based combat operations, the imagery shows a Middle East-based Reaper fitted with a check-mounted sensor array on each side of the aircraft. The image also shows a previously classified blade antenna fitted to the underfuselage.

The MoD provided no details as to the nature of either payload, although Commanding Officer 13 Squadron and Reaper Force Commander, Wing Commander Stuart McAdam, told Janes at the media event that the Reaper now has “a very comprehensive” signals intelligence (SIGINT) suite, as well as a synthetic aperture radar (SAR) capability to see through weather.

In terms of the check-mounted array, the large ‘plank'-like fairing is similar in appearance (although scaled down for the Reaper) to that carried by the recently retired Raytheon Sentinel R1 SIGINT aircraft, and also the US Air Force's (USAF's) Northrop Grumman E-8C Joint Surveillance Target Attack Radar System. The Sentinel was built around a SAR/ground moving target indicator (GMTI) to provide a ‘pattern of life' intelligence capability, and it could be that a version of this capability has been adopted for the Reaper. This particular payload has not previously been seen on a Reaper of any operator, and not just the RAF.

**49 . Date: 25-01-2024Armed ISR / ISTAR - N/A - Contract - UMEX 2024: Cobtec Sunflower 200 UAV to enter into service with UAEURL: https://www.janes.com/defence-news/air-platforms/latest/umex-2024-cobtec-sunflower-200-uav-to-enter-into-service-with-uae**

China-based Cobtec Ltd has confirmed the acquisition of the Sunflower 200 long-range unmanned aerial vehicle (UAV) by an undisclosed Dubai-based entity, a company official told Janes at the Unmanned Systems Exhibition and Conference (UMEX) 2024 held in Abu Dhabi from 23 to 25 January.

Speaking to Janes on 23 January a Cobtec official said the UAV is in production and can be deployed in two configurations.

Configuration A is guided through the Global Positioning System (GPS) and BeiDou Navigation Satellite System, and Configuration B is guided by visual cues using onboard optical systems. Both configurations can strike a target with an engaging range of 1,500 km. The 100 km engagement range is available with wireless video transmission and optional manual locking.

According to Cobtec, the platform structure looks similar to the Iranian Shahed-131 loitering munition, dubbed ‘kamikaze drone'. The Sunflower 200 is said to provide tactical-level intelligence, surveillance, and reconnaissance (ISR), including target designation and strike capabilities. It features a mid-mounted cropped delta wing with endplates. The nose section of the fuselage is cylindrical in shape, which is understood to be swappable, carrying different payloads that can include ISR or explosive warheads. The payloads include anti-jamming modules, which help the UAV navigate and patrol against a wide range of jamming threats.

The Sunflower 200 can be fitted with a 122 mm round for strike operations and the ISR variant can be used in artillery fire correction, the official added.

**50 . Date: 25-01-2024Cargo - MALE - General - PlatformUMEX 2024: Flightwin displays multi-purpose rotary-wing UAVsURL: https://www.janes.com/defence-news/air-platforms/latest/umex-2024-flightwin-displays-multi-purpose-rotary-wing-uavs**

China-based cargo unmanned aerial vehicles (UAVs) developer Flightwin Innovation Technology Company exhibited a range of rotary-wing UAVs during the Unmanned Systems Exhibition and Conference (UMEX) 2024 held in Abu Dhabi from 23 to 25 January.

Speaking to Janes on 23 January Chong Chen, the vice-president of Flightwin, said the FWH-3000 has been developed to address the requirements of cargo and general transportation for both civil and defence domains. The FWH-3000 can transfer cargo such as medicines, weapons, relief material, and can be configured to transport six patients. The FWH-3000 will be production-ready by mid-2024, Chong added.

The FWH-3000 is a medium-altitude long-endurance (MALE) UAV and its design resembles the Chinook helicopter. According to Flightwin, the FWH-3000 features a tandem-rotor configuration with an internal cabin having a volume of 4.2 m³. The maximum take-off weight (MTOW) of the FWH-3000 is listed as 2,500 kg, with a maximum payload carrying capacity of 1,000 kg. The internal cabin of the UAV can carry two 500 kg pallets, and if required, it can also be equipped with an external pod.

The FWH-3000 has a length of 6.5 m, a width of 1.4 m, and a height of 2.5 m. It has a maximum operating range of 600 km, a service ceiling of 6,500 m (21,300 ft), an endurance of five hours, and is capable of operating in wind conditions of and up to Level 7 (maximum wind speed of 61 km/h).

**51 . Date: 22-11-2023Armed ISR / ISTAR - MALE - General - Update: RAF flies Protector in UK airspace for first timeURL: https://www.janes.com/defence-news/air-platforms/latest/update-raf-flies-protector-in-uk-airspace-for-first-time**

The UK Royal Air Force (RAF) has flown for the first time in national airspace the recently received General Atomics Aeronautical Systems Inc (GA-ASI) MQ-9B Protector RG1 medium-altitude long-endurance unmanned aerial vehicle (UAV).

The milestone was announced by the service on 17 November, with the first flight understood to have taken place some days earlier.

“Achieving the first flight of Protector in UK Airspace is a fitting milestone for this phase of testing,” Group Captain Al Rutledge, RAF programme director for Protector, was quoted as saying. “We will now build on this success and look forward to the next test and evaluation phase as part of our preparations for the in-service date later next year.”

As noted in the announcement, the first flight took place within the airspace of the type's future home operating base of RAF Waddington, Lincolnshire, and saw the air vehicle controlled at all times by a pilot on the ground.

The Protector is the UK-specific variant of the MQ-9B SkyGuardian, which is also known as the SeaGuardian in its dedicated maritime fit. Besides intelligence, surveillance, and reconnaissance (ISR) and strike, the RAF envisions a range of roles for the Protector that would include civil support in the UK and maritime awareness at home and abroad.

With an in-service date of 2024, operational flying by 13 and 31 squadrons is scheduled to commence in 2025. Full operating capability is scheduled for 2026.

This article, originally published on 20 November 2023, has been updated with new information.

**52 . Date: 08-09-2023Armed ISR / ISTAR - MALE - General - PlatformUSAFE-AFAFRICA demonstrates remote launch, recovery package for Reaper UAVURL: https://www.janes.com/defence-news/air-platforms/latest/usafe-afafrica-demonstrates-remote-launch-recovery-package-for-reaper-uav**

The US Air Forces in Europe (USAFE) and Air Forces Africa (AFAFRICA) has demonstrated a new package for the remote launch and recovery of the General Atomics Aeronautical Systems Inc (GA-ASI) MQ-9 Reaper unmanned aerial vehicle (UAV), it announced on 7 September.

The command proved the capability during a technological proof of concept of the Reaper's Satellite Launch and Recovery Package (SLR-P) at the 12th Unmanned Aerial Vehicles Base in Mirosławiec, Poland.

“With this technology, we're putting the ‘A' in ACE [Agile Combat Employment] for the MQ-9A,” Major Philip West, USAFE-AFAFRICA project lead said, referencing the ACE acronym whereby USAFE-AFAFRICA seeks to provide the means to deploy rapidly between dispersed operating locations without sacrificing combat capabilities.

As noted in the USAFE-AFAFRICA announcement, the SLR-P comprises “a small, mobile container with an inventory list finely tuned to address the unique operational requirements and environmental nuances of each specific region. The container, designed to be highly mobile, can be retrofitted with its own wheels to be towed or be carried by any means of available transportation”.

The satellite technology employed by the SLR-P enables the rapid power-up of the Reaper and connectivity with the satellite link, minimising pre-mission preparations, while it also marks a departure from conventional practices that necessitated returning to home stations for basic level maintenance, the USAFE-AFAFRICA said.

A USAFE-AFAFRICA subject matter expert (SME) told Janes

**53 . Date: 28-11-2023Tanker - HALE - Market - US DoD Inspector General recommends delay for US Navy MQ-25A purchaseURL: https://www.janes.com/defence-news/air-platforms/latest/us-dod-inspector-general-recommends-delay-for-us-navy-mq-25a-purchase**

A report by the US Department of Defense (DoD) Inspector General (IG) recommended a delay to the US Navy's (USN's) Boeing MQ-25A Stingray purchase.

The report, released on 20 November, found that the USN's schedule includes making a Milestone C decision or certifying that the programme can move from engineering and manufacturing development (EMD) into low-rate initial production (LRIP), before completing developmental testing, and declaring initial operational capability (IOC) before completing operational testing.

Though the USN wants to deploy the MQ-25A as soon as practical, “making critical production decisions without conducting sufficient testing introduces additional risk that the MQ‑25 program will not meet its operational capability requirements, which could require costly and time‑consuming engineering changes and may delay the MQ‑25A's deployment”, wrote the IG. “Therefore, Navy officials should either delay the [Milestone C] and IOC decisions until the program office can conduct sufficient tests and evaluations” or update its risk calculus accordingly.

Currently, the IG report said, the USN does not intend to perform any development, test, and evaluation (DT&E) testing before Milestone C, nor does it intend to perform any initial operational test and evaluation (IOT&E) testing before an IOC declaration. As a result, any problems discovered during those test periods would not be fixed before their associated certifications.

**54 . Date: 09-02-2024Armed ISR / ISTAR - Tactical - General - PlatformWDS 2024: Hoverwing showcases strike-capable HW150V UAVURL: https://www.janes.com/defence-news/air-platforms/latest/wds-2024-hoverwing-showcases-strike-capable-hw150v-uav**

Beijing-based Hoverwing Technology (also known as Hangyi Technology) showcased the HW150V hybrid vertical take-off and landing (VTOL) unmanned aerial vehicle (UAV) at the World Defense Show (WDS) 2024 held in Riyadh from 4 to 8 February.

Speaking to Janes, a Hoverwing official said the HW150V is an operationally proven platform, which can carry out intelligence, surveillance, and reconnaissance (ISR); target-tracking; homeland security; and attack missions. The UAV is manufactured from carbon fibre-reinforced polymer and features an in-house-developed datalink, an electro-optic/infrared (EO/IR) pod, and a ground control station (GCS), the official added.

The HW150V has a modular structure and can be assembled/disassembled without any tools. The UAV can be equipped with a wide range of optronic sensor payloads supporting moving target identification, day and night imaging, and precision targeting. The UAV features a closed-loop altitude algorithm, and sensors manufactured by Hoverwing that support continuous operation in the event of signal interference. It also features a triple-redundant flight control system, which aids operations in austere environments, the official said.

According to Hoverwing the HW150V can operate with other UAVs in the company's portfolio during extended datalink and strike missions. The concept of operations for HW150V includes integrated airborne cluster reconnaissance and strike (two HW150Vs fly in formation), integrated airborne reconnaissance and strike (a single HW150V equipped with a reconnaissance-and-strike package), and separated airborne reconnaissance and strike (a smaller HW16V UAV providing data on the target and an HW150V delivering precision-guided bombs).

**55 . Date: 06-12-2023Armed ISR / ISTAR - MALE - General - PlatformWing Loong II UAV being developed for diverse rolesURL: https://www.janes.com/defence-news/air-platforms/latest/wing-loong-ii-uav-being-developed-for-diverse-roles**

During a recent flight demonstration of the UAV for the state-owned newspaper, Global Times , Li Yidong, chief designer at AVIC Unmanned Aircraft Systems (UAS), said the applications of the Wing Loong series of UAVs “are still expanding”.

The demonstration showed the Wing Loong II's ability to climb, cruise, and operate at low altitude. Li said, “In the future, the [UAVs] will integrate with new technologies, including 5G+, industrial internet, artificial intelligence, and big data, and promote more highly efficient applications in more fields together with the whole industrial chain, such as scientific investigation, mapping, and logistics”.

The demonstration was conducted at AVIC's Zigong Aviation Industrial Park, according to state-owned media.

Janes assessed video imagery of the demonstration event, which included flights by at least two variants of the Wing Loong II UAV. This includes AVIC's Ganlin-1, a version of the Wing Loong II used for “weather modification operations”. Equipped with six pods, including a flame-emitting system for ionisation, this UAV is being used for cloud seeding and to measure meteorological conditions. The second UAV flown was a combat variant of the Wing Loong II with a specialised jammer pod. Janes has assessed that this pod comprises a wideband jammer operating in the 0.5–40 GHz range.

These trials are almost certainly part of AVIC's ambition to adapt the Wing Loong II for multiple applications by integrating diverse payloads. Li acknowledged this to the Global Times when he said that AVIC's UAVs will be subject to “technical differentiation” and that “different genres of UAVs will have different applications”.

**56 . Date: 02-11-2023Armed ISR / ISTAR - Tactical - General - PlatformDRDO progresses weaponised Archer UAVURL: https://www.janes.com/defence-news/defence/latest/drdo-progresses-weaponised-archer-uav**

India's Aeronautical Development Establishment (ADE) – an agency under the state-owned Defence Research and Development Organisation (DRDO) – has disclosed new details about the development and testing of its new Short-Range Unmanned Aerial Vehicle-Weaponised (SRUAV-W) – also known as ‘Archer'.

An ADE official told Janes at the eighth Aerospace and Defence Manufacturing Show (ADMS), which was held in Bangalore from 26 to 27 October, that the SRUAV-W/Archer is based on the ADE's Rustom-1 tactical UAV. “We are working through the flight test phase of Archer. We are confident that we'll be able to complete the initial weaponised flight test phase by June 2024,” the official said.

Initial development of the Rustom-1 started in 2009 for the intelligence, surveillance, and reconnaissance (ISR) role. Under the Archer project, the UAV has been remodified to carry out armed missions. The modification is understood to have started in mid-2022.

In a series of tests by ADE, Archer has constantly achieved an altitude of 20,000 ft. The system was designed to fly at a ceiling of 22,000 ft, the official said. The lower ceiling reflects the ADE's ongoing tests to support the Archer system's integration of payloads including anti-tank guided missiles and anti-personnel missiles.

The official did not disclose the engine manufacturer, but it is understood by Janes to have been imported from France. Driven by a three-bladed pusher propeller, Archer is propelled by a 16 hp piston engine.

**57 . Date: 06-03-2023Swarm - Mini - Contract - Indian Army receives ‘swarming' UAVsURL: https://www.janes.com/defence-news/defence/latest/indian-army-receives-swarming-uavs**

The Indian Army has acquired its first batch of “swarming” unmanned aerial vehicles (UAVs).

The acquisition follows a request for information (RFI) issued by the Indian Army in mid-2021. The USD15 million contract was won in September 2021 by Newspace Research & Technologies Pvt Ltd (NRT), a startup company based in the southern Indian city of Bangalore.

Speaking to Janes , the company said it was “awarded the contract” under the fast-track procurement initiative of the Indian Army using new emergency procurement powers given to it in 2020. These powers were given to the army following rising tensions between India and China in the eastern Ladakh region.

NRT said it completed delivery of the contract by 2 March 2023. Janes has learnt that the contract covered the delivery of 100 UAVs.

Sameer Joshi, the founder of NRT, said that the “swarm” UAVs or autonomous surveillance and armed drone swarm (A-SADS) as they are known in the Indian Army, comprise the company's Beluga and Nimbus models of UAVs.

According to the company, these UAVs are within the maximum take-off weight (MToW) class of between five and 30 kg. According to information published by the company, the A-SADS has a radius of operation of 50 km, an endurance of three hours, and a service ceiling of 20,000 ft.

“The UAVs have applications for kinetic attack, intelligence, surveillance and reconnaissance(ISR), and as communications relays,” Joshi said.

The A-SADS are designed for heterogeneous operations, according to information published by NRT. The two types of UAVs can collaborate on tasks for multiple mission types, according to published company literature. Janes

**58 . Date: 24-04-2024Armed ISR / ISTAR - MALE - General - New aerial vehicle seen on Chinese H-6 bomberURL: https://www.janes.com/defence-news/defence/latest/new-aerial-vehicle-seen-on-chinese-h-6-bomber**

A Chinese Xi'an Aircraft Company (XAC) H-6MW bomber has been photographed in flight while carrying a new type of air-launched vehicle.

The H-6MW is a specialised, cruise missile-carrying variant of the People's Liberation Army Air Force's (PLAAF's) strategic bomber. Janes has previously assessed that the aircraft is the airborne launch platform for the Aviation Industry Corporation of China (AVIC) WZ-8 supersonic, high-altitude reconnaissance unmanned aerial vehicle (UAV).

However, the new aerial vehicle seen carried by the bomber differs in design from the WZ-8, suggesting it could be part of a new programme to develop a supersonic or hypersonic air vehicle. A photograph of the H-6MW carrying the new aerial vehicle first appeared on Chinese social media from the third week of April. The programme is likely inspired by the WZ-8 programme.

Powered by two liquid-fuelled (possibly hydrazine-based) rocket engines, the WZ-8 has two outward canted fins on the wingtips as well as what appears to be a conformal synthetic aperture radar under its wings and dorsal satellite communication or navigation antennas. The WZ-8 is operational with the PLAAF's 30th Air Regiment, operating from Luhe-Ma'an Air Base near Nanjing.

The WZ-8 is estimated to have a length of between 11.5 and 13 m and a wingspan of between 4.5 and 6.7 m.

The new air vehicle seen on the H-6MW is assessed by Janes

**59 . Date: 28-04-2023ISR / ISTAR - Mini - Requirement - New Zealand reduces EMAC to data fusion effortURL: https://www.janes.com/defence-news/defence/latest/new-zealand-reduces-emac-to-data-fusion-effort**

The New Zealand Ministry of Defence (MoD) is set to engage with industry suppliers in May to inform the evaluation criteria and scope for a new Data Fusion System (DFS) for maritime domain awareness.

A request for proposal (RFP) is expected in June-July 2023, but the DFS was originally supposed to be the first phase of the MoD's now defunct Enhanced Maritime Awareness Capability (EMAC) project worth NZD300–600 million (USD184–368 million).

However, the MoD has insisted that EMAC has not been cancelled.

Anton Youngman, deputy secretary of defence policy and planning at the MoD, told Janes, “Defence is continuing to work on the EMAC programme, with an indicative business case for phase one under way. The first phase of this project is focused on a data fusion system – referred to as the All-of-Government Maritime Domain Awareness (AOGMDA) project.”

However, the DFS industry briefing announcement released on 27 April indicates that since being renamed as the DFS, the AOGMDA project is now a standalone effort – a considerable downscaling of the original programme that would have introduced additional surveillance platforms.

EMAC was supposed to deliver a range of satellite surveillance, uncrewed aerial vehicles, and fixed-wing surveillance capabilities that would support New Zealand's civil and defence air surveillance capability. According to the Defence Capability Plan 2019, EMAC was intended to “free up the new P-8A maritime patrol aircraft fleet to fly more missions in the South Pacific and further afield”. A request for tender for EMAC was due in 2020 and scheduled to achieve an initial operating capability in 2023.

**60 . Date: 14-07-2023Armed ISR / ISTAR - MALE - General - ArmamentThailand uses DP16 UAV to test-fire laser-guided bombsURL: https://www.janes.com/defence-news/defence/latest/thailand-uses-dp16-uav-to-test-fire-laser-guided-bombs**

Thailand's Aero Technology Industry Company Limited (ATIL), which is partly controlled by the state-owned Defence Technology Institute (DTI), has test-fired laser-guided bombs (LGBs) using its DP16 unmanned aerial vehicle (UAV).

The test, announced by the DTI on 13 July, helped evaluate the strike capabilities of the DP16.

The DTI said two LGBs were launched from the DP16, which flew at a speed of 130 km/h to reach a target located at a distance of about 2 km. The LGBs were dropped from about 6,000 ft above the ground surface and took around 25 seconds to hit the target.

The DP16 has been built for combat support and can conduct armed attack; intelligence, surveillance, and reconnaissance (ISR); artillery fire calibration; battlefield damage assessment; and monitoring and patrol missions.

According to company specifications, the DP16 has a wingspan of 10 m, a length of 6 m, and a maximum take-off weight (MTOW) of 360 kg. The UAV has a maximum payload capacity of 80 kg, a speed of 180 km/h, and a cruising ceiling of 3,000–4,000 m.

The DP16 has an endurance of six hours with a full load and can be equipped with more than three rounds of LGBs at a time.

The DP16 was showcased at the Defense & Security show in Bangkok in August 2022 by ATIL alongside its other variants including the DP20 and DP20-A.

**61 . Date: 12-01-2024ISR / ISTAR - MALE - General - Update: Indian Navy to induct Hermes 900 StarlinerURL: https://www.janes.com/defence-news/defence/latest/update-indian-navy-to-induct-hermes-900-starliner**

The Indian Navy will induct two Hermes 900 Starliner unmanned aerial vehicles (UAVs) by the end of February, a spokesperson for the Indian Navy told Janes on 10 January.

Elbit Systems' Hermes 900 Starliner is manufactured in India by Adani Defence and Aerospace under the name ‘Drishti 10' for Indian customers. Drishti 10 was unveiled on 10 January in the presence of India's Chief of the Naval Staff, Admiral R Hari Kumar.

The Indian Navy spokesperson said the Drishti 10 UAVs will be handed over to the service in Porbandar, located along the coast of the Arabian Sea in the western state of Gujarat.

“Indian Navy personnel are currently undergoing training provided by Adani officials to efficiently operate the Drishti 10 UAVs,” the spokesperson added.

Janes understands that the Indian Army is also procuring two Drishti 10 UAVs, which are expected to be delivered to the service by mid-2024. The Indian Army had not responded to Janes request for more information at the time of publication.

In his address at the unveiling ceremony, Adm Kumar said the UAV will be a “force multiplier” for the Indian Navy, undertaking intelligence, surveillance, and reconnaissance (ISR) operations across the Indian Ocean.

He emphasised “the importance of autonomous systems in the rapidly evolving and dynamic tech-infused wars of the contemporary world”.

“Autonomous systems are becoming a preferred choice in the order of battle for nations across the globe,” he said, adding, “[China and Pakistan] collectively hold a very large inventory of UAVs” making it necessary for the Indian Armed Forces to expand its own assets and capabilities in this area.

**62 . Date: 17-02-2023ISR / ISTAR - Tactical - Pitch - Aero India 2023: Scheibel, VEM pitch Camcopter S-100 to Indian NavyURL: https://www.janes.com/defence-news/industry-headlines/latest/aero-india-2023-scheibel-vem-pitch-camcopter-s-100-to-indian-navy**

Schiebel Systems India and VEM Technologies have showcased the Camcopter S-100 unmanned aircraft system (UAS) featuring the script of the Indian Navy and the roundel of India on the airframe at the Aero India 2023 show in Bangalore, which was held from 13 to 17 February.

Schiebel Systems India – a subsidiary of Schiebel Corporation, the original equipment manufacturer of the S-100 UAS – and local firm VEM Technologies are understood to have jointly submitted a response to the Indian Navy's request for information (RFI) to procure 40 Naval Shipborne Unmanned Aerial Systems (NSUAS). The Indian Navy intends to deploy the NSUAS on naval vessels over 100 m in length.

In the RFI, issued in June 2022, the Indian Ministry of Defence (MoD) and the Indian Navy said the NSUAS will be used for surveillance missions, signals intelligence (SIGINT), target acquisition, reconnaissance, and maritime domain awareness around a naval task group. Secondary roles include anti-piracy measures, anti-terrorist activities, and search-and-rescue support.

The MoD and the Indian Navy are expected to complete evaluations of platforms bidding for the NSUAS programme by March 2023. As part of an earlier procurement programme, the Indian Navy has trialled the S-100.

In response to the new Indian Navy requirement, Schiebel Systems India and VEM Technologies plan to produce the vertical take-off and landing (VTOL)-capable S-100 along with the assembly and integration of payloads. Schiebel Corporation said it will seek to maximise local content.

Jajati Mohanty, the CEO of Schiebel Systems India, told Janes,

**67 . Date: 31-07-2024Armed ISR / ISTAR - HALE - General - ArmamentAustralia keeps options open on Ghost BatURL: https://www.janes.com/osint-insights/defence-news/air/australia-keeps-options-open-on-ghost-bat**

The Australian government has said it has not ruled out the possibility of equipping the Boeing MQ-28A Ghost Bat unmanned aerial vehicle (UAV) with weapons. This is despite recent media reports in Australia that said Canberra is considering the platform primarily for unarmed reconnaissance operations.

The Australian government has previously said that MQ-28A – being developed by Boeing and the Australian Department of Defence (DoD) under Royal Australian Air Force's (RAAF's) Loyal Wingman-Advanced Development Programme – will operate alongside high-performance, manned combat aircraft and provide strike and intelligence support. However, media reports in late July said the government is now considering a dedicated intelligence, surveillance, and reconnaissance (ISR) role for the UAV.

Australia's Assistant Minister for Defence Matt Thistlethwaite said in a media interview on 24 July that the MQ-28A is “a really important part of the reconnaissance and surveillance programme that's being developed by the Albanese government”, according to a transcript published by the DoD. According to Thistlethwaite, the programme has “huge export potential for Australia”.

However, Thistlethwaite added that he is aware that the programme “has the capability in the future to be an armed and a combat [UAV]”, adding that these “decisions will be made in the future”.

When asked by Janes for clarification on these comments, the DoD directed Janes to remarks by Australian Minister for Defence Richard Marles, who said misunderstandings about the role of the MQ-28A could have been prompted by discussions about the UAV's payloads.

**68 . Date: 29-07-2024Mini - Requirement - Australia to procure small UASs under project Def 129URL: https://www.janes.com/osint-insights/defence-news/air/australia-to-procure-small-uass-under-project-def-129**

The Australian Department of Defence (DoD) plans to procure several unmanned aircraft systems (UASs) from German company Quantum-Systems and Australian company Sypaq Systems as part of project Def 129.

A spokesperson for the DoD told Janes on 24 July that Quantum-Systems and Sypaq Systems will “deliver up to 110 small UASs for the Australian Defence Force (ADF)”.

These UASs will include Quantum-Systems' Vector UAS and Sypaq's CorvoX UAS, the spokesperson said.

The deliveries of these UASs are core to implementing project Def 129. The spokesperson said that “as part of the 2024 National Defence Strategy (NDS) and Integrated Investment Program (IIP), existing land and maritime UAS projects were amalgamated into project Def 129”. The NDS and IIP were released by the Australian government in April to improve the force posture and capabilities of the ADF.

“This amalgamation [of existing UAS projects into project Def 129] seeks to leverage opportunities which enhance interoperability and efficiencies in UAS capability delivery to the integrated force,” the spokesperson added.

“Def 129 will deliver enhanced situational awareness and increased force protection through the acquisition and sustainment of tactical to nano-UAS platforms capable of operating across the spectrum of maritime and land force operations,” the spokesperson said.

According to the spokesperson, “A component of Def 129 is to deliver small uncrewed aerial systems capable of providing organic intelligence, surveillance, and reconnaissance (ISR) support to land force operations at the combat team level”.

**69 . Date: 02-01-2025Fixed Wing - Armed ISR / ISTAR - MALE - Contract - Baykar confirms Akinci deliveries to UAEURL: https://www.janes.com/osint-insights/defence-news/air/baykar-confirms-akinci-deliveries-to-uae**

The Turkish company Baykar announced on 1 January that it has delivered at least two of its Bayraktar Akıncı twin-engine unmanned aerial vehicles (UAVs) to the United Arab Emirates (UAE).

In a statement listing its major achievements in 2024, it said at least one Akinci was delivered to the UAE in January with at least one more delivered in December. In contrast to most of the other deliveries it listed for the year it did not release photographs to show the Akıncıs in the UAE.

The UAE's Akıncı order was not previously announced but Haluk Görgün, the president of Türkiye's Defence Industry Agency, said in October 2023 that Turkish-Emirati co-operation on the UAV and Baykar's smaller Bayraktar TB2 was unprecedented in quantity and quality.

The Baykar statement also noted it had signed a strategic alliance with the UAE's Edge group and carried out test-firings of that company's Desert Sting 16 small guided bomb in January. These developments were announced by Edge at the time, when it released a video showing a Desert Sting 16 being dropped from a TB2 during testing in Türkiye.

Baykar's end-of-year statement also announced that Akıncıs had been delivered to Pakistan in July and Azerbaijan in November, releasing photographs showing the UAVs in those countries. Both Azerbaijan and Pakistan have previously confirmed they had received Akıncıs.

The statement did not mention Akıncı deliveries to Burkina Faso even though that country's president officially handed over at least two to his military on 8 April or Mali, which displayed two in November.

**70 . Date: 28-11-2024Fixed Wing - Armed ISR / ISTAR - HALE - General - Boeing says on track with contracted MQ-28A productionURL: https://www.janes.com/osint-insights/defence-news/air/boeing-says-on-track-with-contracted-mq-28a-production**

The production of MQ-28A Ghost Bat Collaborative Combat Aircraft (CCA) on order by the Royal Australian Air Force (RAAF), including three Block 2 aircraft, is on track to be completed next year, Boeing has said.

Boeing Defence Australia is contracted to produce 10 MQ-28A Block 1 CCAs for the RAAF. On 9 February 2024 the Australian government announced the approval of an additional AUD399 million (USD258.8 million) in funding for the continued development of the MQ-28A, including the production of the three Block 2 aircraft.

According to Glen Ferguson, director of the MQ-28 Global Program at Boeing, “to date”, the company “has produced a total of eight MQ-28A [Block 1] prototype aircraft, with three RAAF Block 2 variants currently in production and planned to be completed by the end of 2025”.

“We have worked closely with the RAAF to mature the concept of operations for MQ-28,” Ferguson told Janes in November, adding that “significant progress” has been made in the programme in the last two years to “mature the Ghost Bat capabilities”.

“We are working towards being able to deliver an operational capability to the RAAF in the next few years,” he added.

Boeing Australia's development of the MQ-28A is being conducted in partnership with the Australian government under RAAF's Loyal Wingman-Advanced Development Programme. Canberra regards the MQ-28A as a critical force multiplier.

An Australian Department of Defence (DoD) spokesperson told Janes

**71 . Date: 26-02-2025Fixed Wing - Loitering Munition - Mini - General - PlatformBrazil's BRVANT enters loitering munitions marketURL: https://www.janes.com/osint-insights/defence-news/air/brazils-brvant-enters-loitering-munitions-market**

Brazilian unmanned aerial vehicles (UAV) manufacturer BRVANT – Soluções Tecnológicas has developed a family of loitering munition systems intended for use by dismounted infantry and special operations forces.

The family comprises two fixed-wing craft, Hunter V1 and Hunter V2, BRVANT told Janes on 25 January. Both come equipped with artificial intelligence (AI)-driven data processing.

While the Hunter V1 is designed for the anti-personnel role, equipped with a 1 kg thermobaric warhead, Hunter V2 can carry a 5 kg thermobaric or high-explosive anti-tank warhead suitable for striking armoured and unarmoured vehicles. Hunter V2 can carry additional sensors to perform intelligence, surveillance, and reconnaissance (ISR) roles.

Hunter V1 is powered by an electric engine, while Hunter V2 can be powered by either electric or gasoline engines. While Hunter V1 can be launched by hand, elasticcatapult, or canister, Hunter V2 requires launch from a catapult, pylon, or canister.

Both models come standard with an electro-optical gimbal, autopilot unit, multiband encrypted telemetry system, inertial measurement unit (IMU), GPS receiver, and a forward-looking flight camera.

The loitering munitions received development funding from Brazil's state-owned Funding Agency for Studies and Projects (FINEP).

Hunter V1 has a length of 1.1 m, a wingspan of 90 cm, a maximum take-off weight (MToW) of 4 kg, and a maximum range of 10 km. The larger Hunter V2 offers a length of 1.5 m, a wingspan of 1 m, an MToW of 25 kg, and a maximum range of 40 km.

They can undertake functions such as swarm flight and fully autonomous navigation, or be remotely controlled through a ruggedised portable or a fixed ground control station with an integrated mission planning system.

**72 . Date: 15-11-2024Armed ISR / ISTAR - MALE - Contract - Croatia to acquire TB2 UCAVs from TürkiyeURL: https://www.janes.com/osint-insights/defence-news/air/croatia-to-acquire-tb2-ucavs-from-turkiye**

Croatia is to acquire the Baykar Bayraktar TB2 unmanned combat aerial vehicles (UCAVs) from Türkiye.

Croatia's Deputy Prime Minister and Minister of Defence, Ivan Anušić, announced the procurement on 15 November as part of a wider raft of purchases geared at bolstering the Balkan country's armed forces.

Anušić did not disclose numbers or delivery dates.

The Turkish-built Bayraktar TB2 is 6.5 m long and has a 12 m wingspan. It is equipped with an electro-optic/infrared (EO/IR) sensor, synthetic aperture radar, and weapons. The weapons package for the TB2 includes laser-guided MAM-L thermobaric and MAM–C high-explosive Smart Micro Munitions, as well as training munitions from Roketsan.

With a maximum take-off weight (MTOW) of 630 kg, the air vehicle can carry up to 55 kg in mission system and/or weapons payload. Performance specifications give the Bayraktar TB2 a cruising speed of 70 kt, a range of 150 km, an endurance of 24 hours, and a service ceiling of nearly 30,000 ft.

Besides Croatia, the Bayraktar TB2 has been sold to the armed forces of Albania, Azerbaijan, Burkina Faso, Djibouti, Ethiopia, Kosovo, Libya (the Türkiye-backed Government of National Accord), Lithuania (having acquired at least two air vehicles on behalf of Ukraine), Morocco, Pakistan, Poland, Qatar, Romania, Türkiye, Turkmenistan, Ukraine, the United Arab Emirates, and Uzbekistan. Niger and Iraq have announced orders, while Serbia and Slovakia are reported to be in discussions for the system.

The Polish Ministry of National Defence (MND) has previously valued each TB2 system (comprising six air vehicles, three ground control stations, and spares) at USD67 million.

For more information on the TB2, please seeBayraktar TB2 .

**73 . Date: 12-06-2024ISR / ISTAR - Mini - Contract - HEMUS 2024: Greek Ucandrone UAVs inducted into Bulgarian serviceURL: https://www.janes.com/osint-insights/defence-news/air/hemus-2024-greek-ucandrone-uavs-inducted-into-bulgarian-service**

The Bulgarian Armed Forces began using a new type of intelligence, surveillance, target acquisition, and reconnaissance (ISTAR) unmanned aerial vehicle (UAV) with its land forces in May. The co-founder of manufacturer Ucandrone, Dimitris Stefanakis, confirmed the development to Janes at the HEMUS 2024 defence exhibition in Plovdiv, Bulgaria, on 7 June.

Bulgaria's land forces confirmed delivery of some of the UAVs on 13 May, releasing a video on 5 June confirming the system, which they call ‘Aquila', had by then been in use for a few days and showing it unpacked with control panels in a field. Stefanakis also confirmed it is in use, adding to Janes that 36 have been ordered, with deliveries continuing.

Based near Athens, Ucandrone's UAV of the same name is a vertical take-off and landing (VTOL) UAV that has four wing-mounted electric motors for VTOL and one larger electric motor at the rear for providing forward thrust during conventional flight. Stefanakis said the internal structure of the drone is made from carbon fibre, with design and manufacturing conducted in-house.

Stefanakis showcased various command-and-control solutions available, from what he said was a drone feed to a smartphone device for use at squad level, up to multimonitor displays for battalion-level planning. In clear conditions, the electro-optical suite integrated into the bottom of the drone's fuselage can see up to 40 km, he said, adding that battery endurance ranges from 90 to 180 minutes, depending on external conditions.

**74 . Date: 20-02-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - PlatformIDEX 2025: Edge Group unveils Jeer UAVURL: https://www.janes.com/osint-insights/defence-news/air/idex-2025-edge-group-unveils-jeer-uav**

Edge Group unveiled a prototype of a medium-altitude long-endurance (MALE) unmanned aerial vehicle (UAV) named Jeer at the International Defence Exhibition & Conference (IDEX) 2025 held in Abu Dhabi from 17 to 21 February.

The company said Jeer is designed for intelligence, surveillance, and reconnaissance (ISR) and ground attack missions. The prototype displayed at the event featured a Rutan design (canard configuration) and two Desert Sting 16 air-to-ground guided munitions, fitted to the two wing hardpoints (one each).

Janes analysis indicates the UAV is powered by a horizontally opposed four-cylinder, turbocharged piston engine with a rating in the range of 100–120 hp and driving a three-blade propeller in pusher configuration. The airframe is constructed using composite material with sweptback high aspect ratio wings, a rectangular section fuselage, a shoulder-mounted complex delta-wing planform having winglets with control surfaces, and high-mounted canards. It has a dorsal air intake towards the aft section of the fuselage, and features a fixed tricycle landing gear configuration, with the main landing gear having spring steel legs.

The Jeer has multiple attachment points under the wings, which suggest it can be equipped with more pylons (as opposed to the two observed on the prototype). The UAV was also observed carrying a multisensor gimballed electro-optic (EO) turret under the front fuselage belly section. Given the role of the platform, the turret could have a daytime sensor, infrared sensor, laser rangefinder, and laser designator.

**75 . Date: 19-02-2025Fixed Wing - Armed ISR / ISTAR - MALE - Contract - IDEX 2025: Edge to deliver Jeer UAV, not Reach-S, to UAEURL: https://www.janes.com/osint-insights/defence-news/air/idex-2025-edge-to-deliver-jeer-uav-not-reach-s-to-uae**

Edge will deliver its Jeer unmanned aerial vehicle (UAV) to the United Arab Emirates (UAE) Armed Forces instead of the Reach-S, the group's chairman told Janes during the International Defence Exhibition & Conference (IDEX) 2025 held in Abu Dhabi from 17 to 21 February.

“Jeer is the same category [as the Reach-S], has the same payload, [and] the same envelope, but it will sell for USD499,000. Nothing comes close in the market at that price point with that spec,” Faisal al-Bannai said. “We are killing the Reach-S, along with every other product in the market.”

Edge announced during the Dubai Airshow in November 2023 that the UAE Ministry of Defence (MoD) had placed an order for 100 Reach-Ss, a medium-altitude long-endurance (MALE) UAV unveiled at the show two years earlier.

While the value of the Reach-S contract was not announced at the time, Bannai told Janes during IDEX 2023 that the basic aircraft would be sold for USD1.1 million, undercutting rival models that sell for USD3.5–5 million.

At IDEX 2025, Bannai said Edge will now deliver the Jeer to the MoD instead of the Reach-S “at a fraction of the price” and to the same timeline.

“We went to the client and said, ‘we have a change of plan, we are not going to deliver this to you; here is the product we will deliver to you; it is 10% of the price of the market product, I will start delivering to you at the end of the year',” he said. “We had clients about to place orders for the Reach-S and we said we have a better product for you.”

**76 . Date: 07-11-2024Armed ISR / ISTAR - HALE - Requirement - IFC 2024: Polish Air Force pushing for CCA fundingURL: https://www.janes.com/osint-insights/defence-news/air/ifc-2024-polish-air-force-pushing-for-cca-funding**

The Polish Air Force is pressing its government to provide funding for its plans to field an unmanned ‘loyal wingman' for its future fleet of Lockheed Martin F-35A Lightning II combat aircraft, the Deputy General Commander of the Polish Armed Forces said on 6 November.

Speaking a year to the day since he first disclosed at the same IQPC International Fighter Conference (IFC) in 2023 that Poland was conducting a market evaluation of potential collaborative combat aircraft (CCA) types for its Harpii Szpon (Harpy‘s Talon) requirement, Major General Cezary Wiśniewski said at the IFC 2024 in Berlin that the air force “is pushing very hard to find the money to bring this capability forward”.

With the Polish Air Force contracted to buy 32 F-35As under the Harpy programme, Harpy‘s Talon is designed to add affordable mass. International development efforts currently under way that Maj Gen Wiśniewski previously cited as being of interest to Poland included the Boeing MQ-28 Ghost Bat that is being led by the Royal Australian Air Force and the Collaborative Combat Aircraft project of the US Air Force (USAF).

On the subject of the USAF's CCA project, Maj Gen Wiśniewski said that the Polish Air Force is looking to see if it will be orientated towards operations in the Indo-Pacific region, or if it will be optimised for use in Europe.

**77 . Date: 05-07-2024ISR / ISTAR - Mini - General - Indian Army takes delivery of JF-2 UAVsURL: https://www.janes.com/osint-insights/defence-news/air/indian-army-takes-delivery-of-jf-2-uavs**

Indian firm Johnnette Technologies, based in the northern state of Uttar Pradesh, has conducted a training course to support Indian Army operations of the company's JF-2 unmanned aerial vehicle (UAV). The company started deliveries of the JF-2 in June.

Johnnette Technologies received a government patent for the JF-2 design in October 2023. The army awarded it a contract for an undisclosed number of JF-2 units in December 2023. The company confirmed in a press release that training to support the JF-2 was conducted in July but did not elaborate.

The company has claimed that the JF-2 is India's first fixed-wing, hand-launched, stealth UAV designed for border intelligence, surveillance, and reconnaissance (ISR) operations. Its payload includes day-and-night thermal imaging cameras. Johnnette Technologies said the UAV has anti-jamming and anti-spoofing capabilities and features a crash-resistant avionics bay.

The JF-2 has a range of 15 km and an endurance of up to 90 minutes. The company said the UAV has been tested at a maximum altitude of 18,000 ft.

In addition to the JF-2, the company said it has recently received a contract from the Indian Army to supply more than 150 JM-1 loitering munitions that can operate at 18,000 ft.

According to Johnnette Technologies, the JM-1 is a stealth loitering munition that features artificial intelligence and anti-jamming technologies.

**78 . Date: 19-03-2025Fixed Wing - ISR / ISTAR - MALE - Pitch - Industry responds to Norwegian unmanned HALE ISR requirementURL: https://www.janes.com/osint-insights/defence-news/air/industry-responds-to-norwegian-unmanned-hale-isr-requirement**

Two original equipment manufacturers (OEMs) have responded to a request for information (RFI) to provide Norway with an unmanned high-altitude long-endurance (HALE) intelligence, surveillance, and reconnaissance (ISR) capability.

General Atomics Aeronautical Systems, Inc (GA-ASI) and Northrop Grumman told Janes in March that they had responded to the RFI to field such a capability from the Norwegian Arctic island of Andøya from 2029, pitching the MQ-9B SeaGuardian and MQ-4C Triton respectively.

“General Atomics has responded, and we remain very enthusiastic about the roles and missions MQ-9B SeaGuardian can provide for Norway,” GA-ASI spokesperson Mark Brinkley told Janes on 19 March, days after Triton project manager Brad Champion said, “There is much that Triton can do within the Norwegian theatre specifically, and within the High North generally.”

Janes understands that no other OEM has been approached by the Norwegian government for the requirement that was identified in the country's Long-Term Defence Plan (LTDP). It is to be based out of Andøya Air Station, which is to be reconstituted as a military base after the Royal Norwegian Air Force (RNoAF) ceased flying there in 2016.

In terms of the SeaGuardian bid, Brinkley pointed to the electro-optic/infrared (EO/IR) video, 360° maritime radar coverage, and full signals intelligence (SIGINT) capabilities of the maritime variant of the SkyGuardian (also known as Protector in the United Kingdom). “In addition, MQ-9B is the only remotely piloted aircraft able to perform the anti-submarine warfare (ASW) mission, including sonobuoy monitoring and deployment, allowing it to enhance Norway's existing fleet of Boeing P-8A Poseidon maritime patrol aircraft,” he said.

**79 . Date: 27-01-2025Fixed Wing - Armed ISR / ISTAR - MALE - Contract - Japan to procure 23 MQ-9B SeaGuardiansURL: https://www.janes.com/osint-insights/defence-news/air/japan-to-procure-23-mq-9b-seaguardians**

Japan's Ministry of Defense (MoD) is working to finalise a contract with General Atomics Aeronautical Systems Inc (GA-ASI) to procure MQ-9B SeaGuardian remotely piloted aircraft (RPA) for the Japan Maritime Self-Defense Force (JMSDF).

A spokesperson for the MoD told Janes, “The JMSDF plans to acquire 23 MQ-9B SeaGuardians.”

The spokesperson said if the MoD is able to sign the contract with GA-ASI by fiscal year (FY) 2025, it will expect the MQ-9B SeaGuardians to be delivered to the JMSDF in FY 2028.

GA-ASI announced in early December 2024 that its SeaGuardian has been selected by the JMSDF for the service's long-endurance unmanned aerial vehicle (UAV) programme. The JMSDF has been testing SeaGuardian since May 2023, GA-ASI said.

Japan's defence budget request for FY 2025 highlights the MoD's plans to procure long-endurance UAVs to “strengthen intelligence and surveillance capabilities while minimising human casualties”.

GA-ASI said the JMSDF conducted different tests with SeaGuardian including evaluations about using the RPA to conduct missions currently undertaken by manned platforms.

According to Janes All the World's Aircraft: Unmanned , SeaGuardian has a length of 11.7 m, a wingspan of 24 m, a maximum take-off weight of 5,670 kg, and a maximum external payload capacity of 2,155 kg. The RPA has an operating altitude of 40,000 ft, a maximum speed of 210 kt, a maximum range of 6,000 n miles, and a maximum endurance of 30 h.

**80 . Date: 23-08-2024Armed ISR / ISTAR - HALE - General - PlatformKAI considers design options for loyal wingmanURL: https://www.janes.com/osint-insights/defence-news/air/kai-considers-design-options-for-loyal-wingman**

Korea Aerospace Industries' (KAI's) ‘loyal wingman' unmanned combat aerial vehicle (UCAV) is undergoing design changes to “satisfy future market requirements”. Changes include a possible reduction in the size of the aircraft, KAI said.

The UCAV programme was conceived to support KAI's KF-21 4.5-generation fighter aircraft with a low acquisition, low-operating-cost attritable, combat platform. While the UCAV is being developed to be relatively inexpensive compared with the KF-21, KAI now acknowledges an increase in programme costs.

“[This is] because KAI's engineers are looking for optimal design options [including] the use of a [high-performance] … turbofan engine,” a company spokesperson told Janes on 19 August. However, the spokesperson added that the “iterated or revised design can be downsized without reduced capabilities”.

Janes reported in 2023 that designers expected the UCAV to be a third of the size of the KF-21. In October 2023 during the Seoul International Aerospace and Defense Exhibition 2023 (ADEX 23), a KAI representative told Janes that the unmanned fighter will have a potential length of 14 m and a wingspan of 10 m. This is roughly equivalent to the dimensions of the KAI FA-50 light attack aircraft, the KAI representative added at the time.

However, in the company's latest communication with Janes , the spokesperson said that “a change of aircraft size can occur anytime during the design iteration if a revised design is expected to meet the requirements”.

“As KAI's loyal wingman is in the conceptual design phase, indeed, there can be many options to satisfy expected future market,” the spokesperson added.

**81 . Date: 21-03-2025Fixed Wing - ISR / ISTAR - Mini - Contract - Netherlands upgrades and procures more Puma UASsURL: https://www.janes.com/osint-insights/defence-news/air/netherlands-upgrades-and-procures-more-puma-uass**

The Netherlands is upgrading its Puma All Environment (AE) small unmanned aircraft systems (UASs) and procuring larger Puma Long Endurance (LE) UASs, the Dutch Ministry of Defence (MoD) announced on its website on 19 March. The contract was signed with US company AeroVironment in Utrecht, the Netherlands, earlier the same day.

Dutch Puma AE block II UASs will be upgraded to block III standard, which the MoD said can operate in areas in which global navigation satellite services are denied. Other capabilities will be improved and the UAS will receive a vertical take-off and landing (VTOL) kit.

Planning calls for the upgraded UASs to be delivered in 2025 and to be operational at the squad and platoon levels later in the year and at the company level probably in 2026, according to the Dutch MoD.

The Netherlands will also receive Puma LE UASs with a longer range than the Puma AE.

The Dutch MoD noted that Puma is used mainly for reconnaissance and that the small UAS collects detailed up-to-date information during operations, improving situational awareness of large areas and providing early warning of dangerous situations such as blocked routes or suspect vehicles. The UASs can also be used for civilian tasks, the Dutch MoD said.

Puma can be operated by individual infantry soldiers and from Fennek armoured reconnaissance vehicles, with the ministry aiming for all reconnaissance units to be equipped with the UAS.

The Puma upgrade is part of a wider Royal Netherlands Army plan to increase UAS capabilities, which the Dutch MoD expects to contribute to the service's modernisation and improved effectiveness.

**82 . Date: 28-01-2025Fixed Wing - ISR / ISTAR - Mini - Contract - North Macedonia to receive US donation of Raven and Puma UASsURL: https://www.janes.com/osint-insights/defence-news/air/north-macedonia-to-receive-us-donation-of-raven-and-puma-uass**

The governments of the United States and North Macedonia have agreed on a donation for the Army of the Republic of North Macedonia (Armija na Republika Severna Makedonija: ARSM) of unmanned aircraft systems (UASs), the North Macedonian Ministry of Defence (MoD) confirmed to Janes on 24 January.

Following comments made by North Macedonian Defence Minister Vlado Misajlovski to national media outlet Kurir on the transfer of five UASs by the US, the MoD told Janes that this donation is included in six arms agreements that have been signed by the respective governments.

“These six new government-to-government agreements include AeroVironment Raven and AeroVironment Puma small unmanned aerial vehicles (drones) in addition to small-arms and accessories, individual equipment and ammunition, cyber-defence capabilities, and Joint Conflict and Tactical Simulation (JCATS) software, all for use by the ARSM's Light Infantry Battalion Group (Lesna Peshadiska Borbena Grupa: LPBG),” the MoD said. It added that production of the UASs would begin “after the related government-to-government agreements are signed by both the US and [North] Macedonian authorities” with delivery to North Macedonia to be “in the following years”.

The MoD did not disclose the number of air vehicles per UAS.

The six different government-to-government agreements will have a combined value of USD26.5 million, and would enable the North Macedonian army to replace over 50% of its current Yugoslavia-era small calibre infantry weapons.

**83 . Date: 31-01-2025Swarm - General - SoftwareNorway's Defence Research Establishment reports progress in UAV swarm technologyURL: https://www.janes.com/osint-insights/defence-news/air/norways-defence-research-establishment-reports-progress-in-uav-swarm-technology**

The Norwegian Ministry of Defence's (MoD's) Defence Research Establishment (Forsvarets forskningsinstitutt: FFI) has reported “significant progress” in information sharing between surveillance and attack unmanned aerial vehicles (UAVs) while in a so-called drone swarm, Rikka Amilde Seehus, research manager at FFI, told Janes on 29 January.

Seehus said the development was enabled partly by a software platform for autonomous UAV operations called Valkyrie. The FFI has been working with Norwegian technology company Six Robotics to develop the platform. “It allows autonomous assets to work together at scale, regardless of platform or mission type,” Christian Fredrik Eggesbo, founder and CEO of Six Robotics, told Janes on 30 January.

The past year has also seen new developments in Valkyrie's user interface. “It has become easier for the operator to control the swarm, locate targets, and engage them,” Seehus said. Central to the system's use is the hand-off of targets from surveillance to attack UAVs. When work started on the system in 2022, an interceptor UAV was used amid a team of surveillance UAVs as a quadcopter attack swarm. The operator would control the surveillance UAV, while the attack UAVs would follow autonomously.

“We thought it would be a good idea if a surveillance drone flew together with the attack drones. Then we play on the strengths and weaknesses of the two systems,” Seehus said in a 27 January FFI press release. Initially carried forward for testing with quadcopters, research continues to adapt the software for fixed-wing UAVs as well.

**84 . Date: 15-11-2024ISR / ISTAR - Mini - Contract - Poland orders further FlyEye UASsURL: https://www.janes.com/osint-insights/defence-news/air/poland-orders-further-flyeye-uass**

Poland has ordered further WB Group FlyEye unmanned aircraft systems (UASs) to equip the country's army.

The Polish defence procurement agency, Agencja Uzbrojenia, announced the follow-on buy on 15 November, saying 13 new systems will be delivered by the end of 2024.

“Transformation of the armed forces is a priority for us. The purchase of FlyeEye UAVs [unmanned aerial vehicles] will increase the reconnaissance capabilities of the Polish Army. Why is this happening in stages? Because from month to month our partners are developing their capabilities, and we are buying the latest version. These drones are useful in military and non-military situations,” Deputy Prime Minister Władysław Kosiniak-Kamysz said.

The Polish special operations forces first ordered the FlyEye in 2010, with follow-on orders coming after. News of this latest follow-on FlyEye contract came 14 months after Poland signed for more than 400 of the UASs at the International Defence Industry Exhibition MSPO 2023. At the time it was noted by the Agencja Uzbrojenia that this original deal would comprise just under 1,700 UAVs, equating to about four air vehicles per system.

As well as the FlyEye, the Polish Armed Forces also fields the Insitu ScanEagle and Orbiter tactical UASs, as well as the Baykar Bayraktar TB2 medium-altitude long-endurance UAS.

For more information on FlyEye, please see WB Electronics FlyEye .

**85 . Date: 08-04-2025H-Rotary - Loitering Munition - Mini - General - SOFINS 2025: MBDA details Akeron family of loitering munitionsURL: https://www.janes.com/osint-insights/defence-news/air/sofins-2025-mbda-details-akeron-family-of-loitering-munitions**

European missile manufacturer MBDA detailed its new Akeron RCX 50 and RCH 170 loitering munitions at the Special Operations Forces Innovation Network Seminar (SOFINS) 2025 defence exhibition held from 1 to 3 April in Gironde, Southwest France.

Development of both models was prompted by a request for proposal by the French Agence de l'Innovation de Défense (AID; defence innovation agency), in May 2022, which called for the rapid development and testing of two types of loitering munitions with a view to rapid acquisition by the French Armed Forces.

Two separate projects were launched: Colibri and Larinae. Project Colibri called for a short-range (5 km) munition capable of engaging dismounts and lightly armoured targets. The second, Larinae, called for the development of a long-range (50 km) munition capable of engaging heavily armoured targets. In both cases, the cost-effectiveness of the solution was emphasised. In March 2023 four solutions were selected, two for each project. For Project Colibri, they were the Sphinx concept, created by teaming between MBDA and French unmanned aerial vehicle (UAV) maker Novadem, and the rival Dard (stinger) by a grouping of KNDS and French UAV maker Delair. For Larinae they were the Mutant XL concept, created by a teaming from MBDA and again Delair, and the Stryx concept, created by a grouping of KNDS, French UAV maker EOS, and French artificial intelligence (AI) company Traaks.

**86 . Date: 04-02-2025Fixed Wing - Armed ISR / ISTAR - HALE - General - PlatformSpain's SATNUS completes first ‘loyal wingman' flight trials for FCAS/SCAFURL: https://www.janes.com/osint-insights/defence-news/air/spains-satnus-completes-first-loyal-wingman-flight-trials-for-fcasscaf**

Spain's SATNUS consortium has completed its first flight trials campaign, geared at developing unmanned ‘loyal wingman' technologies for the Future Combat Air System/Système de Combat Aérien du Futur (FCAS/SCAF) programme with France and Germany (as well as Belgium as an observer).

The Spanish Alliance of Technologies for NGWS Unmanned Systems (SATNUS) consortium made up of GMV, Sener Aerospace and Defence, and Tecnobit-Grupo Oesía announced the milestone at the end of January. It said that initial flight trials of ‘loyal wingman' remote carrier (RC) technologies being developed within the scope of the Next-Generation Weapon System (NGWS) component of FCAS/SCAF have concluded at the facilities of the El Arenosillo Experimentation Center (CEDEA) in Huelva, on the southern Spanish Atlantic coast.

“This campaign has been framed within the activities assigned to SATNUS in Pillar 3 of the Spain-France-Germany collaboration programme NGWS/FCAS, responsible for the maturation of technologies for remote-controlled air systems and teamed flight with manned and unmanned aircraft,” SATNUS said.

As noted in the announcement, the two-week trial campaign saw an MCSD modified target drone conduct multiple flights during which SATNUS validated the modifications and different payloads. “With the achievement of these initial tests, SATNUS continues to progress according to the road map foreseen for Phase 1B of the NGWS programme, with the ambitious final goal of demonstrating MUM-T [manned unmanned teaming] functionalities with multiple MCSD demonstration platforms in flight,” the consortium said.

For more information, please see Partner governments reaffirm commitment to NGWS element of FCAS/SCAF .

**87 . Date: 18-03-2025Fixed Wing - ISR / ISTAR - HALE - Pitch - Special Report: Northrop Grumman outlines Triton pitch to NorwayURL: https://www.janes.com/osint-insights/defence-news/air/special-report-northrop-grumman-outlines-triton-pitch-to-norway**

Northrop Grumman has outlined its MQ-4C Triton bid to Norway, leveraging existing capabilities and partnerships as the NATO country looks to field a high-altitude long-endurance (HALE) unmanned intelligence, surveillance, and reconnaissance (ISR) capability from 2029.

Speaking at an event in the Norwegian Arctic town of Andenes that is set to host the capability at the adjacent Andøya Air Station, Northrop Grumman officials outlined the key capabilities of the Triton as they see them for the HALE ISR requirement within the context of Norway's Long-Term Defence Plan (LTDP).

At the same time, the officials highlighted how Triton interoperability with the newly acquired Royal Norwegian Air Force (RoNAF) Boeing P-8A Poseidon maritime multimission aircraft (MMA) in particular, and the proposed establishment of a centre of excellence at the location, will be key selling points for the HALE unmanned aircraft system (UAS).

“When we talk about the long-term defence plan for Norway, there's a discussion of large, long-range UASs,” Triton project manager Brad Champion said on 11 March, speaking at the event, which was focused on Norway's aerial- and space-based contribution to the collective NATO security of the High North.

**88 . Date: 30-08-2024Armed ISR / ISTAR - MALE - Safety - Turkish UAV shot down over northern IraqURL: https://www.janes.com/osint-insights/defence-news/air/turkish-uav-shot-down-over-northern-iraq**

The reformed Iraqi Air Defence Command (IADC) almost certainly shot down its first aircraft on 29 August, when a Turkish Aksungur unmanned aerial vehicle (UAV) crashed in Kirkuk.

Iraq's Joint Operations Command released a statement saying Iraqi air defences detected a UAV at 0900 h and tracked it as it approached Kirkuk city but failed to identify it. It added that the aircraft was observed crashing at 1030 h, after which it was confirmed to have been a Turkish UAV, and a team had been formed to investigate the cause of the crash.

Turkish Foreign Ministry spokesperson Öncü Keçeli responded to the Iraqi statement by saying, “Co-ordination has been established with Iraqi authorities to shed light on all the details of the incident.”

Iraqi media cited the spokesperson for Kirkuk police as saying the UAV had been shot down by Iraqi air defences. Al-Rabiaa TV cited Brigadier General Abdul Salam Hamoudi Ramadan, the deputy commander for the IADC's northern region, as saying his force hit the UAV near Jimen and it then crashed in Kirkuk city.

At least two videos showed a surface-to-air missile being launched, purportedly at the UAV, from a rural area from different angles. The missile appeared to be launched by a Pantsir-S1 air-defence system, a type that has been in service with the IADC since 2014, although it could not be confirmed this was the engagement that destroyed the UAV.

The aircraft's burning wreckage was filmed falling from the sky and landing in Kirkuk by multiple people. Photographs showed one part of the wreckage had the name of Turkish Aerospace's twin-engine long-endurance Aksungur UAV written on it.

**89 . Date: 27-03-2025Contract - UK acquires classified UAVs for ISRURL: https://www.janes.com/osint-insights/defence-news/air/uk-acquires-classified-uavs-for-isr**

The United Kingdom has acquired new and classified unmanned aerial vehicles (UAVs), it was revealed on 25 March.

Answering a question in parliament on the procurement of unmanned aircraft systems, Minister of State at the Ministry of Defence (MoD) Maria Eagle said that three aircraft were ordered as an urgent capability requirement at the end of January 2025. These, she said, will deliver intelligence, surveillance, and reconnaissance (ISR) to the UK.

The minister disclosed no further details, except to note that the procurement was separate from the UK's work in procuring UAVs for both the International Fund for Ukraine and the International Drone Capability Coalition, also for Ukraine.

In response to a request for further information, the MoD told Janes on 26 March, “We cannot comment further due to security reasons.”

For more information on the UK's unmanned ISR plans, please see UK launches Project Aether for stratospheric global comms, ISR .

**90 . Date: 11-04-2025Market - Ukraine conflict: Norway joins Drone Coalition as Europe steps up aidURL: https://www.janes.com/osint-insights/defence-news/air/ukraine-conflict-norway-joins-drone-coalition-as-europe-steps-up-aid**

Norway has joined the Drone Coalition as other European countries announce new military aid packages to Ukraine.

Norwegian Minister of Defence Tore Sandvik signed the document on 11 April that formally brings his country into the group that is led by Latvia and the United Kingdom and includes Australia, Canada, the Czech Republic, Denmark, Estonia, Germany, Italy, Lithuania, the Netherlands, New Zealand, Poland, Sweden, and Ukraine.

The Drone Coalition was formally established on 14 February 2024 and is focused on providing the Armed Forces of Ukraine with unmanned aerial vehicles (UAVs) and components produced by the industry of Ukraine Defense Contact Group (UDCG) countries. The UDCG is a coalition of around 50 countries, which meets monthly to discuss Ukraine's security needs.

For more information on the Drone Coalition, please seeFirst contracts expected as Drone Coalition seeks to ramp up UAV supply to Ukraine .

**91 . Date: 17-04-2025Fixed Wing - ISR / ISTAR - Requirement - UK spells out Corvus UAS requirement to replace WatchkeeperURL: https://www.janes.com/osint-insights/defence-news/air/uk-spells-out-corvus-uas-requirement-to-replace-watchkeeper**

The UK Ministry of Defence (MoD) has revealed details of its requirement for a new Land Tactical Deep Find (LTDF) unmanned aircraft system (UAS) to succeed the British Army's legacy Watchkeeper system across the Divisional and Corps Deep battlespace.

In a prior information notice (PIN) published on 15 April, the MoD's Defence Equipment and Support (DE&S) organisation outlined the scope of the persistent surveillance capability – known as Project Corvus – and revealed a ‘stretch target' of fielding a minimum deployable capability by the end of 2025. Industry engagement is intended to inform the acquisition strategy and identify potential tenderers ahead of starting a competitive procurement.

The MoD in November 2024 announced that the Thales UK Watchkeeper intelligence, surveillance, target acquisition, and reconnaissance (ISTAR) UAS would be retired by the end of March 2025. Operated by 47 Regiment Royal Artillery, the Watchkeeper system suffered significant attrition in service and was seen as increasingly obsolete.

Project Corvus – valued at up to GBP130 million (USD172 million) over a five-year period – envisages the acquisition of a “modern, deployable, easily supportable, and cost-effective [LTDF] capability” from the end of December to replace the Watchkeeper. The initial requirement covers two task lines, each able to provide 24 hours of persistent surveillance, plus five years of support from minimum deployable capability.

**92 . Date: 26-03-2025Fixed Wing - Loitering Munition - Mini - General - PlatformAvalon 2025: Innovaero unveils OWL X precision munition test demonstratorURL: https://www.janes.com/osint-insights/defence-news/defence/avalon-2025-innovaero-unveils-owl-x-precision-munition-test-demonstrator**

The Australian-based company Innovaero has unveiled the first test demonstrator of its new One-Way Loitering X (OWL X) precision munition at the Avalon 2025 international airshow.

Marcus Colman, CEO of Innovaero, said in a statement on 26 March that the company is building on the success of the OWL B programme to create an expanded range of loitering munitions for customers.

The OWL X is being developed as a Counter-Robotic and Autonomous Systems (C-RAS) platform. Australian media has reported that Innovaero, which is a partner of BAE Systems Australia (BAESA), won an Australian Army Innovation Day (AID) 2023 contract to develop the C-RAS.

According to the Australian Army Research Centre, the Australian Department of Defence (DoD), through AID 2023, sought to identify and select a C-RAS platform capable of detecting, identifying, targeting, and countering RAS threats to ground troops.

The OWL X is a canister-launched unmanned aerial vehicle (UAV) equipped with folded, pop-out wings. A model of the precision munition displayed at Avalon 2025 shows that the UAV is powered by a small gas-turbine engine. This engine is potentially a 3D-printed engine developed by the Australian company, Aurora Labs Limited (also known as A3D).

Aurora Labs said in August 2024 that it had signed a memorandum of understanding (MOU) with Innovaero to supply micro gas-turbine engines for testing on OWL munitions.

Janes has reached out to Innovaero and BAESA for additional information.

**93 . Date: 07-06-2024General - Insitu anticipates adding payloads to ScanEagle and Integrator, finds FLARES customerURL: https://www.janes.com/osint-insights/defence-news/defence/insitu-anticipates-adding-payloads-to-scaneagle-and-integrator-finds-flares-customer**

Unmanned aerial vehicle (UAV) manufacturer Insitu intends to introduce a suite of new capabilities over the next five years, Diane Rose, the company's president and CEO, told Janes on 31 May.

“Some of the types of payloads and capabilities … including things like datalinks, satcom [satellite communications] capability for extended range, and persistence, those things are very interesting over the next five years,” said Rose.

The improvements are intended to keep Insitu's main products, the Integrator UAV and its smaller cousin the ScanEagle, relevant in complex electronic environments.

“There are a number of detect, classify, and identify-type automated capabilities that are being incorporated into payloads and software,” Rose said. “And then, of course, very important for both ScanEagle and Integrator is resiliency in GPS-denied-type environments.

“We've got SIGINT [signals intelligence] payloads, EW [electronic warfare] payloads, full motion video turrets for both day and night-time operations, laser designation capability, and then maritime search [is] also a capability, an area where we're seeing a lot of advancement in payloads,” Rose continued.

Rose declined to specify which existing or potential customers are requesting the payload developments. At least 15 ScanEagle systems have been donated to Ukraine, where existing capabilities had to be upgraded to function as intended during the massive jamming that characterises the battlefield there.

“There's a demand signal for more of those systems to support Ukraine, and we are ready [and] willing to provide them,” said Rose. “We did provide some updates to the systems that were provided to [Ukraine] early on in the war, to include some multi-[global navigation satellite services] kits that allow them to have more resilient communications.

**94 . Date: 13-09-2024Loitering Munition - Mini - Contract - Land Forces 2024: Innovaero wins contract to accelerate OWL B developmentURL: https://www.janes.com/osint-insights/defence-news/defence/land-forces-2024-innovaero-wins-contract-to-accelerate-owl-b-development**

The Australian government and Innovaero have signed a contract to accelerate the development of the company's One-Way Loitering B (OWL B) precision munition.

The contract, which Innovaero announced on 12 September at the Land Forces 2024 defence exposition in Melbourne, Australia, will move the OWL B programme “into a third phase in the development”, according to the company. The defence show was held from 11 to 13 September.

This phase comprises the manufacturing, testing, “and evaluation of the capability to further refine [the OWL B's] performance, reliability, and interoperability with existing Australian Defence Force (ADF) assets”, the company said in a press release.

The third phase is expected to build on a series of live-fire tests that Innovaero, Australian agencies, and the Australian Army oversaw in 2023–24. During this testing, the system “completed successful flight tests and payload integration”, the company said.

According to Innovaero CEO Marcus Colman, the “new phase builds on these successful tests and positions us to deliver a combat-ready system that meets the evolving needs of modern warfare”.

The third phase is also expected to accelerate the OWL B programme “towards operational readiness”, according to Innovaero, which added that the phase would involve the “rigorous testing of new units”.

The electrically propelled OWL B can be launched by catapult or pneumatically, when stored, with wings folded in a 2 m canister. Images of the loitering munition released by BAE Systems (which is a shareholder in Innovaero) shows that the munition is powered by a T Motors AT7215 KV220 brushless motor, weighing 565 g.

**95 . Date: 06-12-2024Fixed Wing - Armed ISR / ISTAR - HALE - Requirement - ‘Loyal Wingman' concepts in Japan, Britain for GCAP support taking shapeURL: https://www.janes.com/osint-insights/defence-news/defence/loyal-wingman-concepts-in-japan-britain-for-gcap-support-taking-shape**

Collaborative Combat Aircraft (CCA) under design in Japan and the United Kingdom to operate alongside the next-generation Global Combat Air Programme (GCAP) aircraft are being developed for multimission capabilities, company spokespersons have said.

Japan's Mitsubishi Heavy Industries (MHI) unveiled two CCA (also known as ‘Loyal Wingman') concepts at the Japan International Aerospace Exhibition 2024 (JA2024) in October. BAE Systems, which is a lead systems integrator in the GCAP programme, has also revealed new imagery of its “Loyal Wingman” concept, which the company calls the Autonomous Collaborative Platform (ACP). ‘Loyal Wingman' programmes aim to potentially add combat mass to flights of manned fighter and attack aircraft.

MHI's programmes included a missile-like CCA designed for combat support, which the company has designated as the Affordable Rapid Prototype Missile Drone Concept 20X (ARMDC-20X). A second CCA concept is a high-performance tactical combat unmanned aerial vehicle (UAV). An MHI spokesperson told Janes in November that this second concept does not yet have an official designation.

According toMHI, the ARMDC-20X is nearly 6 m long. The concept model displayed at JA2024 included a housing for an electro-optical targeting system (EOTS) in an under-chin position and a dorsal engine intake. The model also had a six-digit serial number (50-6001) that is associated with the Japan Air Self-Defense Force (JASDF).

The second unnamed concept will be about 10 m long, the company has previously said. Janes understands that both CCA concepts are primarily being developed for combat, plus intelligence, surveillance, and reconnaissance (ISR) roles.

**96 . Date: 13-12-2024Hybrid Rotary / Fixed Wing - ISR / ISTAR - Mini - Contract - New Zealand acquires remote ground sensor, UAVsURL: https://www.janes.com/osint-insights/defence-news/defence/new-zealand-acquires-remote-ground-sensor-uavs**

The New Zealand Defence Force (NZDF) has procured small unmanned aerial vehicles (UAVs) and remote ground sensor (RGS) systems to enhance its intelligence, surveillance, and reconnaissance (ISR) capabilities.

These systems will improve the NZDF's capability to conduct ISR operations in difficult-to-access environments, including combat zones and cyclone-damaged regions, the New Zealand Ministry of Defence (MoD) announced on 12 December.

The MoD said it expects these systems to augment the NZDF's situational awareness beyond line of sight.

The MoD's Deputy Secretary of Capability Delivery, Sarah Minson, said the UAVs and the RGSs will be used by the New Zealand Army in security operations, humanitarian assistance and disaster relief (HADR), and search-and-rescue (SAR) missions.

Minson added, “The remotely operated systems are expected to reduce the risk to soldiers operating in challenging environments by providing timely and accurate information that enhances risk assessments and decision-making in the field.”

The NZDF has acquired three types of small UAVs, including German company Quantum Systems' Vector unmanned aircraft system (UAS) for the 16th Field Regiment, the Skydio quadcopter from EPE New Zealand Ltd, and the Black Hornet UAS from Australian company Criterion Solutions Pty for the Royal New Zealand Infantry Regiment, the MoD said.

EPE New Zealand has also delivered the Bertin Exensor Flexnet RGS systems to the NZDF, the MoD added.

According to Janes All the World ' s Aircraft: Unmanned

**97 . Date: 18-02-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - Spain's SIRTAP prototype flight scheduled for August or September, says MoDURL: https://www.janes.com/osint-insights/defence-news/defence/spains-sirtap-prototype-flight-scheduled-for-august-or-september-says-mod**

The first prototype of Spain's SIRTAP unmanned aircraft system (UAS) is currently in production, and its first test flight is scheduled for August or September, Spain's Ministry of Defence (MoD) told Janes on 17 February.

SIRTAP (a Spanish acronym that loosely translates as Integrated System for High-Performance Unmanned Air System) is a medium-altitude long-endurance (MALE) UAS. The system is “not yet” capable of carrying weapons, but it is “a growth capacity considered as part of the design”, according to an MoD spokesperson.

The first production model delivery, which is a set of the system and a simulator, is scheduled for 2026. Each set includes three UASs and a ground control station. The project will be fully developed in 2030, according to a 2 January MoD press release.

Spain purchased the Airbus SIRTAP UAS in a contract valued “close to” EUR495 million (USD518 million), with Airbus announcing the acquisition on 29 November 2023 for a total of 27 UASs, nine ground control stations, and two simulators. All of the UASs will be manufactured and assembled at the Airbus Defence and Space plant in Getafe (Madrid), said the press release.

Previously, Janes reported that the UAS can carry a 150 kg payload and has a maximum take-off weight of 700 kg. SIRTAP is to be equipped with both a multimission radar (enabling overland and maritime roles) and an electro-optic/infrared (EO/IR) sensor turret. The UAS is 7.3 m long, almost 2.5 m high, and has a wingspan of 11.3 m, with a range of over 2,000 km, said the Spanish MoD press release.

**98 . Date: 22-11-2024H-Rotary - Armed ISR / ISTAR - Tactical - General - PlatformUpdate: Chinese FH-909 rotary-wing UAV shows design improvementsURL: https://www.janes.com/osint-insights/defence-news/defence/update-chinese-fh-909-rotary-wing-uav-shows-design-improvements**

Images of the Aerospace Times Feihong Technology Corporation's (Feihong's) new FH-909 vertical take-off and landing (VTOL) rotary-wing unmanned aerial vehicle (UAV) at the recently concluded Airshow China 2024 reveal that the platform has undergone external design changes, suggesting its growing maturity.

The FH-909 is a miniature, unmanned VTOL aircraft designed to penetrate hostile areas and battlespace at low altitude, according to Feihong. In February 2024 the UAV appeared as a model at the World Defense Show (WDS) in Riyadh in conceptual form, with a sleek airframe; swept, stub wings; and small exhausts. At Airshow China 2024 at Zhuhai, however, the UAV was displayed with what appeared to be a composite body, enlarged and additional exhausts for the platform's diesel/gasoline engine powerplants and internal electronics, and redesigned stub wings.

The FH-909 was also shown at Airshow China 2024, with an electro-optic/infrared (EO/IR) pod. A brochure printed by Poly Technologies (a state-owned exporter) states that the UAV is equipped with a synthetic aperture radar (SAR) unit. This system is likely located in a cone protrusion present at the rear of the FH-909's fuselage.

The UAV displayed at Zhuhai also contained bulges on the tail, which are likely GPS/BeiDou navigation reception antennas, Janes assesses. A large cone located in the front, upper fuselage is indicative of a satellite communications (satcom) system. The product literature adds that the platform can also be equipped with an electronic warfare (EW) package.

The FH-909's “payload interfaces” allow the UAV to accommodate payloads for logistics, reconnaissance, strike, and electronic countermeasures, Poly Technologies claims.

**99 . Date: 28-11-2024MALE - Requirement - SoftwareUSAF seeks C2, data relay capability for tactical drone swarmsURL: https://www.janes.com/osint-insights/defence-news/defence/usaf-seeks-c2-data-relay-capability-for-tactical-drone-swarms**

Programme officials at the US Air Force (USAF) are soliciting information from industry to support the development of new command-and-control (C2), data relay, and electronic warfare (EW) payloads, specifically for small unmanned aircraft systems (sUASs).

Managed by the Offensive Small Uncrewed Aircraft Systems (sUAS) System Program Office (SPO), as part of the air service's Intelligence Surveillance Reconnaissance & Special Operations Forces directorate, the sUAS payloads being sought will be able to provide C2 and data relay capabilities “to an sUAS swarm in a contested environment”, according to a November request for information (RFI).

The EW payload will enable the USAF's small unmanned aircraft to carry out those missions “in a contested environment”, the RFI stated.

The focus of the programme will be to develop those specific integrated payloads for signature-managed Group 3 sUASs, service officials said. Group 3 sUASs are defined as tactical-level UASs with an operational weight of 1,320 lb, a maximum speed of 250 kt, and an altitude ceiling of 180 ft, according to a US Department of Defense (DoD) fact sheet.

Examples of Group 3 sUASs include the RQ-7 Shadow and the Small Tactical Unmanned Aerial System (STUAS).

USAF programme officials have not publicly disclosed which Group 3 sUAS the payloads will be developed for in the RFI. However, they did note that industry proposals would be weighed against “platforms with currently integrated payload solutions”. The C2 and data relay payloads, according to the RFI, would be used to enable drone swarms of Group 2 sUASs.

**100 . Date: 05-06-2024Armed ISR / ISTAR - MALE - General - Bayraktar TB3 UCAV passes first ski-jump testURL: https://www.janes.com/osint-insights/defence-news/sea/bayraktar-tb3-ucav-passes-first-ski-jump-test**

The Bayraktar TB3 unmanned combat aerial vehicle (UCAV) under development for the Turkish Navy's new multi-purpose landing helicopter dock (LHD) TCG Anadolu has successfully passed its first land-based ski-jump test.

During the test, which was performed on 1 June at the Baykar Flight Training and Test Center in Keşan, Edirne, the aircraft successfully completed its take-off in all four attempts, Baykar said.

The runway at the centre has been built to the same specifications as that of Anadolu and features a 12° ramp.

The latest test is the airframe's 46th flight overall and marks the beginning of the final phase of testing before the Bayraktar TB3 embarks on Anadolu, Baykar said.

The aircraft was relocated to Keşan to start ski-jump testing in mid-May after successfully completing all low-altitude, medium-altitude, and high-altitude performance and system identification tests at the Akinci Flight Training and Test Center in Çorlu, northwestern Turkey.

Over the course of flight tests to date, TB3 has logged 395 hours and 43 minutes of flight time, Baykar said. Among its test milestones, on 27 October 2023 the aircraft performed its maiden flight and during an endurance test on 20 December 2023 the aircraft remained airborne for 32 hours and covered a distance of 5,700 km. On 26 March 2024 it completed its first flight integrated with Aselsan's Aselflir-500 electro-optical reconnaissance, surveillance and targeting system.

**101 . Date: 07-02-2025Fixed Wing - Armed ISR / ISTAR - HALE - General - PlatformIran reveals unmanned naval versions of Qaher ‘stealth fighter'URL: https://www.janes.com/osint-insights/defence-news/sea/iran-reveals-unmanned-naval-versions-of-qaher-stealth-fighter**

Iran has revealed unmanned naval versions of the Qaher (Conqueror/Omnipotent) F-313 ‘stealth fighter' it first presented in 2013.

Shown for the first time during an event to mark the entry into service of Iran's new Shahid Bahman Bagheri drone carrier on 6 February were two new subscale versions of the Qaher manned fighter that was developed into a prototype but not progressed into an operational combat aircraft.

Imagery and footage of the 36,000 ton, 240 m long converted container ship showed it to be carrying three 60%-scale Qaher-type unmanned aerial vehicles (UAVs) that bore the designation JAS 313 and tail numbers 60-01 and 60-02 (the tail number of the third aircraft could not be discerned), and four much smaller again 25%-scale Qaher-type UAVs, which were also designated JAS 313 but bore tail numbers 25-01, 25-05, and 25-06 (the tail number of the fourth aircraft could not be discerned).

The original Qaher was approximately 14 m in length with a wingspan of about 8 m, and it is likely that the first value in the tail numbers of the new unmanned versions relates to the scale of these aircraft to the Qaher. While the Qaher manned fighter was shown to be a twin-engined prototype, both of the smaller navalised versions appear to be powered by a single turbojet that is scaled to the relative size of the airframe.

The smallest Qaher-type was shown in the footage being flown from the Shahid Bahman Bagheri

**1 . Date: 22-08-2023Armed ISR / ISTAR - MALE - General - PlatformIran unveils advanced 'Mohajer-10' drone able to strike IsraelURL: https://www.jpost.com/breaking-news/article-755706**

Iran celebrated its national defense industry day with the unveiling of a new drone that it claims is the latest achievement of its defense industry.

The “Mohajer-10” is supposed to have a range of 2,000 km. and the ability to fly for up to 24 hours at an altitude of 7,000 meters.

This means that Iran could use this drone to threaten Israel or US forces in the region. Iran’s drones have been in the spotlight in recent years because Iran supplies Russia with its Shahed 136 model kamikaze drones. The new drone has similarities to the US-made Reaper drone as well as other similar drones in this class of long-range UAVs that carry heavy payloads, such as missiles.

**Iran's rise in the defense industry market**

Many countries today make similar drones, such as China and Israel. Israel and the US were the major pioneers of modern drones such as the Predator, Hermes, and Heron drones.

Iran has become a recent player in the drone market, increasing the range and quality of its drones. Iran’s drones have their origins in the 1980s, but only in recent years has Iran been able to arm their drones, and extend their range and abilities. The major issue facing drone manufacturers is making large UAVs that can both carry missiles and hi-tech surveillance systems, and also communicate with their base at long ranges. This aids in precision and impacts how drones can carry out attacks or monitor enemies.

Iran’s drones have often been unveiled in the past with claims of new capabilities, such as new optics, radar, communications, and missile systems, yet many of them don’t live up to their reputations. Iran has used drones in the past that look like the US Predator and Reaper, in Syria and Iraq, and has exported drone blueprints to Hezbollah, the Houthis in Yemen, and Hamas. Iran even used drones to threaten Israel from Syria, however, many of these drones fly at low speeds, like flying lawnmowers, and don’t have large weapon payloads on board.

The Russian decision to acquire Iranian Shahed kamikaze drones has changed the game because kamikaze drones can wreak havoc at long ranges and with some precision. However, these drones are better suited to terrorizing civilians than as a strategic weapon.

Iran’s new drone is supposed to be able to carry a payload of some 300 kg. and has a speed of 200 km. per hour. This is about half as fast as the US Reaper and it’s a payload that is about a quarter of the US equivalent. What that means is that Iran has unveiled a drone that is still a decade or two behind what its competitors have been able to create. Nevertheless, Iran says its drone has the ability to carry weapons, and that it has electronic warfare and intelligence systems on board.

**Iranian president's presence signals drone's importance to Tehran**

Iran unveiled the drone in a ceremony with Iranian President Ebrahim Raisi, illustrating how important this weapon is to Tehran. Iran has recently boasted of new hypersonic and ballistic missile abilities, and is also expecting to import and export more defense systems. The Iranian reports on the drone from Tasnim News say that this is the latest in the Mohajer family of drones that date back decades. According to the reports, Iran has improved its drones greatly in recent years with newer models, which is its main bragging point. It has been building these kinds of drones for many years, often trying to copy other drones, such as US models. However, Iran has rarely been able to build drones with the same type of endurance or abilities as its competitors, and is not always capable of mass production. These days, with Russian backing, Iran is able to establish factories abroad for serial production of these systems, which improves its capabilities.

Iran expects to use these new drones to showcase the country’s pride in its defense establishment. It may try to sell some of them abroad or use them as a flagship of the drone industry. Iran’s Shahed family of drones already included the Shahed 129, which is similar to the newly unveiled Mohajer-10. Other Mohajer drones have been exported by Iran to places like Venezuela, but not this model. Iran also unveiled the ‘Gaza’ drone, which is similar to the Mohajer-10 and Shahed 129 design.

Iran’s own media appears to admit that the Mohajer-10 is not a real game changer, it merely adds capabilities to what already existed. Whether Iran can use these drones effectively abroad is unclear. These types of large drones are easy prey to air defenses due to their slow speed, and are easy to see due to their relatively large radar signature. This means that the next generation of drones many countries are investing in are either swarming drones or loitering munitions, meaning precision kamikaze systems.

The Predator-style drone was well suited to the global war on terror against insurgents and in air space that is not contested, but Iran’s drones will face modern radars and air defenses. The Russian-acquired drones from Iran that are used in Ukraine, for instance, are shot down at a rate of between 60-90 percent according to many reports. This means they are largely ineffective.