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SHOW BUSINESS

IDEX/NAVDEX SHOW DAILY / ABU DHABI / FEB 18 2025

DAY 2

WERTECH SET ALL CYLINDERS

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The partnerships could lead to joint ventures that develop their own intellectual property to address initially Edge's needs, "but then we can address international markets as well," he added.

Edge is not looking to take on large commercial aircraft engine makers, such as General Electric or Rolls-Royce, he noted, looking to stay away from engines above 35,000lb of thrust.

Al Zaadi said Edge's uncrewed aircraft portfolio is now growing to the size that making the engine investment makes sense. The company began to seriously explore the endeavour about a year ago.

"With the right volumes, with the right demand and production that we have, it makes full economic sense for us to be able to embark into developing our own propulsion systems," he said.

The company is not blind to the challenges of developing sophisticated propulsion systems. "We're going into this with very wide eyes, wide open. We know the difficulties; we know the complexities. We know this is not an easy journey," Al Zaadi said.

Edge has used the IDEX defence show to disclose one of its first efforts, the six-cylinder P145I to power uncrewed systems.

Powertech is rapidly growing and looking to build up its production capacity. Al Zaadi said the company is looking to lean into automation and leverage other Edge operations to help build up its manufacturing capacity, including the group's EPI precision engineering unit. "It's not just a matter of producing an engine. It's a matter of how do we produce an engine that's competitive?" he said.

▲ *See p15 for interview with Edge Group MD & CEO Hamad Al Marar*

PROPULSION DESTINY
Khaled Al Zaabi, Edge's president of platforms and systems

AVIATION WEEK NETWORK

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SHOW BUSINESS

DAY 2

IDEX/NAVDEX SHOW DAILY / ABU DHABI / FEB 18 2025

EDGE'S POWERTECH SET TO FIRE ON ALL CYLINDERS

Edge Group's newly-established Powertech engine business is looking to secure the first partnership agreements over the next few months to help underpin its ambition to develop a broad range of engines to power its own and other aircraft.

"We have already signed high-level strategic term sheets and MoUs with strategic partners to explore the different engines that we can co-develop," Khaled Al Zaabi, Edge's president of platforms and systems, said in an interview.

Firm partnerships should be in hand ahead of the November Dubai Air Show, he said.

Powertech represents one of Edge's most ambitious efforts to make the United Arab Emirates more autonomous for its supply of military equipment. It is intended to complement the state-owned companies' autonomous vehicle efforts. "When engineers start to develop an aircraft, the first question they ask is: 'what engine do I have around?' And then they basically design the platform around the engine," Al Zaabi said.

"So for us, propulsion systems, from piston engines, to micro-jets, to medium-sized jets. to large turbojet propulsion systems, is our destiny, because unless we control that or work with partners that enable us to be able to design and develop them, we will never really be taken seriously in terms of delivering our own capabilities."

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BillyPix

PROPULSION DESTINY

Khaled Al Zaabi, Edge's president of platforms and systems

AVIATION WEEK NETWORK

50 YEARS OF STRENGTH: PARTNERING FOR SECURITY AND PROSPERITY.

50 YEARS OF STRENGTH: PARTNERING FOR SECURITY AND PROSPERITY.

LOCKHEED MARTIN

Working dogs play a crucial role in various branches of security agencies, Asem Hyasat

Paw-sitive security from K9 Center

Jordan National K9 Center (JK9) is at IDEX with the main objective to establish itself as a leader in the Middle East K9 industry.

"We are quite a new company, being established in 2020 under the patronage of HM King Abdullah II Bin Al Hussein," said Asem Hyasat, CEO. "Our centre is a fully independent entity and we act as a certification party and watchdog for Jordanian K9 security agencies. We offer our services and products to clients around the world, providing both basic courses, such as detection, protection and patrol, as well as advanced training, including SWAT and special ops courses."

Hyasat said its programmes can incorporate the use of live munitions, flash bangs, smoke grenades, and tactical explosive breaching, as well as K9 services – including various training programmes from narcotics detection to explosive protection.

It also has a breeding section, veterinary hospital and rehabilitation centre ensuring the health and well-being of K9s. "Working dogs play a crucial role in various branches of security agencies and our K9 trainers have many years of special ops experience under their belts," he said.

Boeing sees manned-unmanned teaming as key to F-15EX push

As Saudi Arabia mulls its F-15 replacement options, Boeing argues the latest version's ability to enable close integration with uncrewed systems should give it an edge over rivals.

The combination of the Boeing F-15EX's dual-seat and its digital cockpit system would allow the Royal Saudi Air Force to more easily move toward closer manned-unmanned teaming in the future battlefield, said Kirk Schulz, regional director for the Middle East, Turkey and Africa at Boeing's defence unit (pictured below).

Saudi Arabia has signalled it is looking for more than a fighter as it decides what aircraft it may buy as the kingdom looks to build out its defence industrial know-how.

The UK and Italy, for instance, have dangled potential Saudi involvement in the tri-national global combat air programme sixth-generation fighter project that also involves Japan to entice Riyadh to pick the Eurofighter Typhoon for its F-15 replacement.

Schulz said the U.S. and Boeing also have potential opportunities that could help address Saudi industrial interests, pointing to projects such as the MQ-25 refuelling uncrewed aircraft or the MQ-28 Ghost Bat, as well as the T-7A Red Hawk trainer that is still in development for the U.S. Air Force.

Boeing is starting to have conversations with potential buyers in the Middle East around the T-7, though export deals are likely to take time to materialise with the aircraft still in development and not due for a full-rate production decision in the U.S. until next year.

Boeing is also hoping to gain momentum in the Middle East for two other flagship programmes, the E-7A airborne early-warning aircraft and KC-46 tanker.

Israel and Japan are the only export buyers of the KC-46 so far, which has lost out to Airbus and its A330-based MRTT in Saudi Arabia and the United Arab Emirates.

"We still think there is an opportunity in the region," Schulz said.

Schulz said Boeing has seen "a lot of interest" in the E-7A from multiple potential customers, including those that are looking at how to develop an integrated air picture that mixes fourth and fifth-generation fighters and future uncrewed combat aircraft.

SHOW BUSINESS

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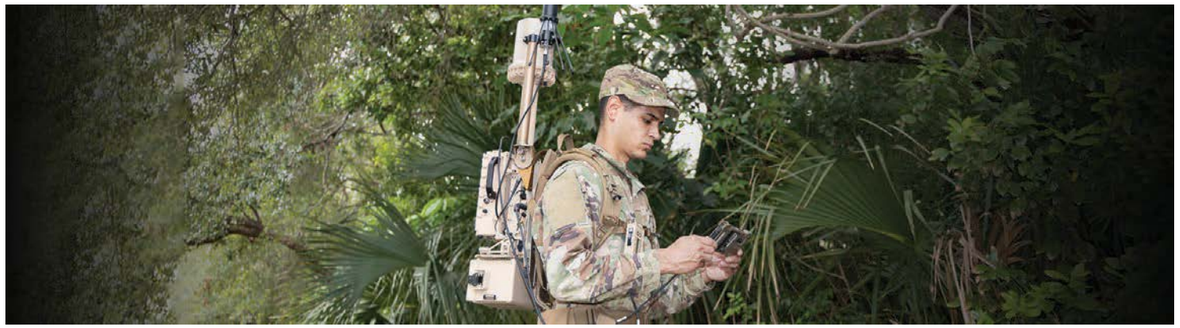


Today's Complex Electronic Warfare Threats Require Modernization Through Smart Industrial Partnerships and Advanced, Interoperable Capabilities

The battlespace of today is much more complex than just a few years ago. Ballistic missiles, attack drones, loitering munitions, and a broader use of the electromagnetic spectrum puts allied ground, maritime, and air platforms at ever-growing risk. The recent conflicts in the Middle East have highlighted these threats, moving allies to quickly update their defensive capabilities. Leonardo DRS believes supporting allied militaries of the United States is critical, and developing closer industrial partnerships and providing advanced military capabilities to ensure a strong and interoperable defense is a necessity.

For more than twenty years, Leonardo DRS has been a close partner to allied nations around the Middle East and North Africa Region who are working to modernize their armed forces, significantly increasing national security through close teamwork and advanced technology to defend against current and future threats.

"As a company deeply committed to supporting the U.S. military and its allies around the world, we take pride in building strong partnerships and delivering our expertise to expand local industrialization and increase national security capacity around the region," said Bill Guyan, president of international business development for Leonardo DRS. "We are proud of our ongoing commitment to our partner countries, and look forward to providing advanced, mission-critical capabilities while strengthening the region's defense industry to ensure a lasting impact."

Strengthening Partnerships to Strengthen National Defense

Leonardo DRS continues to grow its partnerships across the Middle East and North Africa to support allied nations in modernizing its defenses to protect against current and emerging threats. The partnerships range from providing the company's proven, advanced defense technologies, to platform integration, and increasing in-country defense industrial capability.

The design and development of advanced Electronic Warfare (EW) systems has also become a critical modernization element for U.S. allied countries in the region as adversaries gain access to technology that gives them broader availability to the electromagnetic spectrum.

Leonardo DRS EW systems are built with advanced commercial off-the-shelf (COTS) as well as the company's own innovative and proven technologies. This allows Leonardo DRS to build customized, tailored solutions for the unique requirements of each customer. These powerful capabilities extend spectrum superiority and are designed with the flexibility and portability to be integrated into backpacks, a range of mobile, fixed and semi-fixed platforms as well as unmanned platforms, to deliver inexpensive cutting-edge performance in the battlespace.

Advanced Electronic Warfare Technologies

On today's modern battlefield, controlling the electromagnetic spectrum through advanced Electronic Warfare (EW) capabilities is critical to mission success. The accelerated pace of technology in EW is also speeding up modernization efforts as computing power and advanced electronics are more powerful, and innovation drives increased capability.

The U.S. military and allied militaries around the world are using more sophisticated Electronic Warfare technologies to ensure dominance across the electromagnetic spectrum during combat reconnaissance operations. These new capabilities widen the aperture to increase real-time situational awareness in the battlespace and inform decisions, accurately identify and engage targets, and to protect from attacks. Just as critically, EW operations must also have the advanced capability to successfully degrade, disable or destroy an adversary's use of the spectrum.

Leonardo DRS is a trusted company by the U.S. military and its allies in the development and delivery of proven, low-risk, mission-critical electronic warfare systems. The company has deep experience in developing and fielding scalable solutions for electronic protection to electronic attack, and electronic support measures enabling warfighters to passively monitor and understand how the spectrum is being used across the battlespace.

The company understands the unique needs of allied missions in the region and has successfully delivered and supports innovative EW capabilities that give warfighters the control and flexibility to operate as a seamless unit while keeping ahead of current and emerging threats.

In the Middle East, Leonardo DRS has successfully delivered systems providing field-proven Electronic Warfare Battalion capabilities that meet the demands of the threats of today and into the future. As an agile and innovative company, its engineers work closely with customers to understand the specific needs and develop customized solutions that also allow users to easily integrate additional technologies to provide higher levels of capability.

Electronic Attack (EA) is used to degrade, disable or destroy an adversary's use of the spectrum, through the denial of communications, navigation, intelligence gathering or targeting. Electronic Attack is an integral part of a military operation, enabling friendly forces to achieve their missions.

The range of advanced capabilities provided by Leonardo DRS include vehicle-based mobile shelters with the most advanced High-Frequency, VHF, UHF and SHF electronic attack technology for jamming operations. The mobile EA systems are built around the latest receivers, waveform generators/exciters, power amplifiers and transmit/ receive antennas to provide overall control, management, jamming and monitoring capability.

For more tactical EA operations, smaller vehicle-based systems are designed for use against individual adversarial units to create situational confusion and disruption of the ability to communicate, monitor and protect its airspace. Through tactical radars and high-powered and low SWaP systems, a more focused and mobile capability is available for spectrum dominance.

Electronic Support (ES) measure technology enables warfighters to passively monitor and understand how the spectrum is being used across the battlespace. The ES mission provides situational awareness and understanding of the electromagnetic battlespace leveraging the systems' ability to perform emitter detection, signal identification, Direction Finding (DF)/ geolocation, and information monitoring capabilities, allowing informed tactical decision making.

Leonardo DRS Electronic Support capabilities include man-portable, mobile and semi-fixed Communication Intelligence Direction Finding (DF) systems that provide unmatched performance. The mobile and semi-fixed/fixed systems include powerful sensors, high powered computing components and a user-friendly operating experience. The man-portable solution offers a small, powerful and operator friendly unit. The system rapidly detects and geolocates a wide-range of threat signals, monitors signals of interest, and supports real-time analysis to provide mission-critical intelligence to the warfighter. This is accomplished using a single system or by linking several ES platforms together to provide DF geolocation capabilities.

Leonardo DRS is a Trusted Partner

As a company relied upon by the U.S. military to provide innovative and advanced technology, Leonardo DRS is proud of its deep experience in partnering with allied countries to ensure they have access to the best available defense technologies.

To find out more how Leonardo DRS can support the need to modernize defense capabilities, visit www.LeonardoDRS.com or IDEX booth #02-B12.

Hitting attack drones every time, all the time

By leveraging its long-standing capabilities of tracking objects in space, EOS Advanced Technologies (Stand 12-A09) is now offering arguably the most accurate counter-drone systems on the market.

The company's latest R500 remote weapon system, designed to outmatch today's battlefield threats, is making its debut at IDEX this week.

"The increasing use of attack drones in recent times has shown the world's military that accurate cannon fire can defeat this threat – a concept that was deemed outdated," said Dr Andreas Schwer, chief executive officer of EOS Advanced Technologies.

"The key is accuracy, on which we never compromise, and which characterises our remote weapon systems. Our motto is: 'First time, every time.'"

In an interview with Show Business at IDEX, he outlined the company's decades-long experience in tracking and even moving space objects, from satellites to space debris, by using high-powered lasers. "It is in fact possible to change the orbit of a space object, taking it much higher, or if necessary, to destroy it entirely."

He stressed that EOS Advanced Technologies has consistently come out tops in firing trials for the accuracy of its remote weapon systems.

"We have actually beaten a strong international competitor in its home country with a full score of drone kills. That is no mean feat."

The EOS R500 is an improved variant of the battle-proven R400 that has been sold across the Middle East in significant numbers. Dr Schwer is confident the new system will likewise have success in the region.

The R500's advanced counter-drone capabilities based on enhanced firepower, high-resolution EO and thermal sensors and AI-driven tracking algorithms ensure superior target detection, tracking, and engagement.

"Besides this new R500 remote weapon system, our offering comprises several highly-adaptable systems for a range of applications," he stated. "Some like the R150 are designed for light vehicle application, while others are more potent. Our high-energy laser (HEL) system is ideal to protect strategic infrastructure, such as offshore oil rigs and refineries, which are critically important in the region," Dr Schwer concluded.

Australia-based EOS comprises affiliates in the United States, Asia-Pacific and the UAE.

Aselsan working with Calidus

In February 2024, Turkish defence company Aselsan opened an office in the UAE, as it responds to the needs of existing and potential users of its products in the UAE and the Gulf region.

Eight months later in October, at the Turkish Saha Expo 24, the company signed a collaboration agreement with UAE's Calidus Aerospace for cockpit display units (CDUs) for a variety of its airborne platforms and for cockpit display-related technologies, co-production, retrofits, upgrades, and software development.

Aselsan will develop and integrate cockpit display unit kits customised for the Calidus airborne platforms including both the B-250 trainer and B-250 light attack aircraft.

In addition to displays, Aselsan will provide avionics computers, navigation systems and related software. Both companies also agreed to join forces in retrofitting and upgrading rotary and fixed-wing platforms locally, including weaponisation.

BillyPix

Maestral wins major UAE Navy support deal

Maestral has a signed a major contract to become the UAE Navy's strategic partner to provide comprehensive fleet support in a five-year €500 million ($524 million) deal.

The Edge-Fincantieri Abu-Dhabi-based shipbuilding joint venture, which was established in May 2024, was awarded the 'in-service support strategic partnership project' for the entire UAE Navy fleet by Tawazun Council.

It will oversee maintenance management of the UAE Navy to meet key operational and logistic needs and support the UAE Navy's transformation journey to new levels of performance over the next five years, said Maestral.

The Maestral joint venture aims to capitalise on global opportunities for the commercialisation, design, and manufacture of advanced naval vessels and services.

At the show yesterday, Tawazun Council announced a total of 14 local and international contracts signed at IDEX worth a total of Dhs3,968m ($1,080bn), excluding the Maestral contract.

Local firms winning deals were IGG, Thales Emarate Technologies, Edge Group, Calidus Land Systems, Almasaood, National Marine Dredging, Global Aerospace Logistics, IGG and MP3, and Injazat Data Systems.

Overseas firms gaining business were Patria Land Systems, Rheinmetall Electronics, Rheinmetall Air Defence and Maxar Intelligence.

Aspen Medical teams with BlueRoom

Australian firms Aspen Medical and BlueRoom Simulators have unveiled a partnership between the two firms here at IDEX to introduce mixed reality (MR) simulation technology into military healthcare training.

The MR technology, which is being demonstrated by BlueRoom's UAE partner Leader Healthcare at their stand B15 in Hall 12, allows military medics and first responders to train in simulated high-risk scenarios like aircraft and combat zones.

"Training in real-world military environments can be costly and logistically challenging," said Al Martin, chief partnership officer at Aspen Medical, a global leader in providing out-sourced healthcare solutions for public health and defence entities.

"Our collaboration with BlueRoom allows us to bridge that gap, offering high-fidelity, scenario-based training that enhances medical competencies in a highly-efficient and scalable way."

In the blue zone: Visit BlueRoom's mixed reality simulator here at IDEX, with the company's CEO Ben Krynski (left), Al Martin of Aspen Medical, and wearing the headset Khalid Abdelbasit of Leader Healthcare

The MR simulator allows trainees to use their own hands to interact with real equipment in a virtual space – eliminating the need for controllers and enhancing precision in medical procedures such as IV cannulation, airway management, and surgical interventions.

Aspen Medical has been active in the UAE since 2003. "We provide western healthcare in austere and challenging environments," said Martin. Its health services, health infrastructure, and health technology solutions are underpinned by robust clinical governance and quality frameworks, he added.

"The opportunity is around lifting capabilities, and we see higher demand for defence, public health and to support economic growth in a region that recognises and values quality," said Martin.

Goa Shipyard set to deliver new patrol vessel to Indian Navy

Goa Shipyard is preparing to deliver the first example of the next generation offshore patrol vessel (NGOPV) for the Indian Navy, as it shows off one of its predecessors at IDEX.

The Indian yard is building seven of the 110-metre NGOPVs for the navy, with the first scheduled to launch in around four months. A further four NGOPVs are being built by another yard.

The new vessels will be used for a wide range of duties, including coastal defence and surveillance, anti-piracy patrols and search and rescue operations.

Main armament will be a 76mm Oto Melara super rapid cannon and speed will be similar to the 26kts of the earlier Samarth class built for the country's coastguard – one of which is at the quayside here.

The NGOPV will field several indigenous weapons systems and advanced sensors, Goa Shipyard additional general manager Abhishek Singh said at the show. With modifications, the NGOPV could be outfitted with the BrahMos supersonic anti-ship missile, which has a range of up to 290km/155nm.

Construction time for an advanced OPV is 30 months. One vessel is scheduled to be delivered every six months and the vessels will have stealth characteristics.

Goa Shipyard builds around 80 per cent of the vessels destined for the Indian Coastguard, said Singh. The 105m Samarth-class advanced OPV here is one of 11 destined for the coastguard and is powered by two 9,000kw diesel engines giving a maximum speed of 26kts, or an endurance of 6,000nm at a cruising speed of 14-18kts. The 2,400-ton vessel is armed with one 30mm cannon and two 12.7mm heavy machine guns.

Goa Shipyard is India's largest exporter of naval and paramilitary vessels, Singh said, with 36 sold over the past 20 years, with the advanced OPV particularly popular due to its stability, hydrodynamic performance and ergonomics. Two similar vessels have been sold to Mauritius and one to Sri Lanka.

CRUISING IN
The 105m Samarth-class advanced OPV sails in to the show

NEWS IN BRIEF

MBDA's Sea Warden in NAVDEX debut

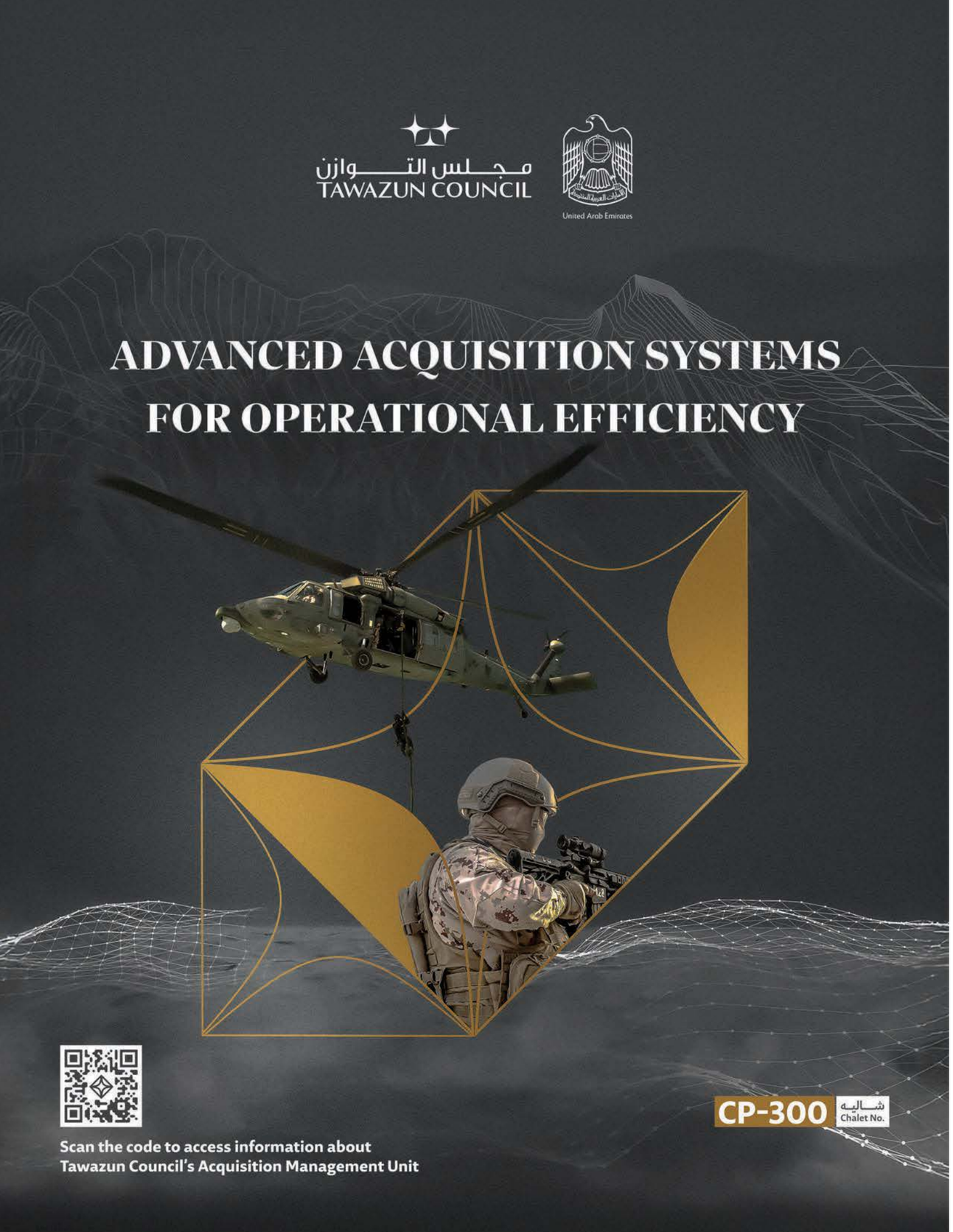
MBDA is showing off its Sea Warden counter-uncrewed aerial system (C-UAS) at NAVDEX for the first time, during a period when drone threats have menaced military and commercial shipping in the region.

Sea Warden, a naval offshoot of the company's Sky Warden system, was first unveiled last year. In addition to C-UAS capabilities, Sea Warden is also designed to counter surface threats.

The company also is showing the latest iteration of the Exocet anti-ship missile, the MM40 B3C and other naval weapons.

The company's parallel IDEX exhibit also has a heavy focus on air and missile defence. The SAMPT/NG, developed through the Eurosam joint venture with Thales, alongside the short-range Mistral 3 and long-range Aster B1 NT systems, are also on display.

Among the battlefield weapons on show are the Akeron LP that recently underwent a French government test firing, the Brimstone missile, as well as the Smart Cruise and Smart Glider air-to-ground weapons the company is looking to develop with the United Arab Emirate Tawazun Council.



C-catcher - The Definitive Airborne Surveillance Radar for Maritime Patrol

C-catcher (ELM-2025) Multi-Mode, Multi-Role AESA Maritime Surveillance Radars - Lead Today's Market and be Ready for Tomorrow's Challenges

Coastal nations face an array of threats, from smuggling, illegal fishing, uncontrolled immigration, and intrusions, related to maritime domain disputes, terrorism and seaborne attacks. Furthermore, the geographical areas concerned are often too vast to control with available naval assets, even when combined with powerful coastal radars. This complexity highlights the significant challenge of accurate and rapid broad Maritime Domain Awareness (MDA).

Organizations tasked with maritime security, therefore, employ airborne surveillance radar systems with very long detection ranges, wide scanning coverage, automatic classification, and simultaneous modes of operation to complete effective broad area coverage. By enhancing MDA, these advanced systems ensure that threats are detected, tracked, and addressed promptly, thereby mitigating risks and safeguarding maritime boundaries.

Leveraging the latest technological developments and extensive experience accrued with the most widely deployed airborne maritime surveillance radar in service today, the benchmark setting ELM-2022, IAI's systems and sensors subsidiary, ELTA Systems Ltd (IAI ELTA), has developed and is ready to deliver a new class leading airborne surveillance AESA radar with unprecedented performance and reliability.

Utilizing in-house AESA technology, advanced processing tools and state-of-the-art electronics, including Gallium Nitride (GaN) RF components, IAI ELTA developed a family of powerful, upgradable software defined radars with reduced weight & power consumption, and higher reliability. Designated C-catcher (ELM-2025), these X Band radars feature interleaving detection modes and cutting-edge automation that enable simultaneous Multi-Mode, Multi-Role capabilities in all weather and visibility conditions.

Credit: IAI

Operating at optimized altitudes to achieve both an extended Line of Sight (LOS) and wide area coverage, C-catcher AESA radars employ advanced maritime modes, including Surface Search, Range Profile/Signature, and Inverse Synthetic Aperture Radar (ISAR) to efficiently detect, track and classify vessels in all sea states. Vital naval combat capabilities, including submarine and periscope detection for Anti-Submarine Warfare (ASW) and naval surface detection for Anti-Surface Warfare (ASuW), are an integral part of the versatile radar family's repertoire. The ability to distinguish very small targets from higher altitude and reject land clutter makes the C-catcher radars highly effective very close to the shoreline.

For wide-area ground surveillance of stationary and moving targets the C-catcher radars feature SAR and GMTI modes. The air-to-air mode provides look up / look down all aspect detection for airborne targets surveillance.

Available in a range of configurations for small UAVs, helicopters and a range of fixed wing aircraft, the C-catcher radars are ready to deliver superb, unmatched performance.

Come and meet with our global experts at Hall B Booth B2.1 or contact us at market@elta.co.il

Edge

Edge contract wins on the rise

A year on from his appointment, on February 1, 2024, Hamad Al Marar, Edge's managing director and CEO, talks about his progress in building the business, reports Alan Warnes

DEALS ARE UP
Edge's managing director and CEO Hamad Al Marar was formerly managing director of the missiles and weapons cluster for four years

"The most important things, from my perspective, is that Edge is now known as an exporter of arms, and that wasn't the case two years back," Al Marar said.

"The increase in signed deals, shows that confidence [in Edge] is on the rise and I think that by itself is a good achievement. The export market for us is extremely important not just for financial gain, but for it's a validation of the business.

"I want to increase the international contribution of our sales. We have inked significant orders internationally even if the lead time between signature and delivery does vary a lot.

"In 2024 we inked more than $2.1bn worth of export contracts. Africa is our biggest market [where the Angolan government signed a one billion Euro deal for a fleet of corvettes in February 2023], followed by Latin America and East Asia.

"It helps of course because we are more cost effective with our solutions and offer a very diverse range of products. We managed to get into these saturated markets because we are perceived in a very positive manner and try our best to accommodate our customers' requirements, then deliver on it.

"I would love to push the international sales from 10 per cent to 40 per cent within five years, and its achievable given the readiness of our products now.

"Joint ventures, mergers or partnerships in whatever form are a vehicle to deliver that and it plays differently from one country to another according to their legislation.

"What is very important for us is to achieve growth and we need to have an open mind and share the risk.

"Both countries will have an equal potential for exports and that by itself is a good positive to have. Plus working with your partner's local industry and local ecosystem helps the supply chain, perhaps bringing a reduction of costs, increase in know-how, diversity and new ideas," Al Marar said.

"In 2024 we inked more than $2.1bn worth of export contracts. Africa is our biggest market [where the Angolan government signed a one billion Euro deal for a fleet of corvettes in February 2023], followed by Latin America and East Asia"
HAMAD AL MARAR EDGE

The deal with Brazil's SIATT, is a classic example of that. Edge is investing in its Mansup all-weather, over-the-horizon anti-ship missile and then pushing ahead with developing the Mansup-ER.

The strategic partnership with the Brazilian Navy will complete full development of the Navy's national anti-ship missile (Mansup) by the end of 2025.

Under the contract, Edge and SIATT, Brazil's leading smart weapons specialist, will provide the necessary resources to ensure the Mansup is delivered in time for integration on the Brazilian Navy's new Tamandaré class of stealth frigates.

The contract also provides the framework for Edge to utilize the Mansup technology and technical data in the development of the Mansup – extended range.

One of Edge's most recent initiatives is Powertech, which in a February 12 press release said 'will strengthen Edge's portfolio by creating cross-complementary synergies, supporting the performance of Edge's UAVs and autonomous systems'.

"It's important, because power plants are the pulse and heart of any platform and its where we see the potential, both to be in control and establish the sovereignty of the platform.

"That only comes [through developing] sub-system by sub-system, but this is difficult without producing a power plant. For example, we need an engine for the stealthy Jeniah UCAV and Powertech will drive all the power plant initiatives we need.

"It's a wholly-owned business, but of course we are looking at strategic alliances when needed. We know how complex it is to build the larger engines, but we are preferring to stick to smaller ones.

"There are many willing partners whether in Europe or US to consider, and with our needs, we could bring added value to them. There will be many unmanned aerial vehicles on show at the Edge stand, and the majority of them will require a reliable engine," Al Marar concluded.

WORLD DEFENSE SHOW
SAUDI ARABIA
8-12 FEB 2026

Expanding and Unveiling New Features, WDS 2026 Takes the Industry to the Next Level

Expanding immensely since its 2022 inception, World Defense Show 2026 promises to supersede its previous two editions in both size and impact. The purpose-built venue in Riyadh is increasing exhibition stand space by 58%, implementing an additional fourth hall with total area covering more than 273,000 sqm. Witnessing unpresented global interest, the show is already 65% sold out.

Beyond increase in size, the third edition of WDS will be held under a new theme, "The Future of Defense Integration," encapsulating the seamless integration of cutting-edge technologies across all defense domains — air, land, sea, space and security. Unveiling groundbreaking features, all of which support the aim to take the industry to new heights, tapping into advanced technologies and capabilities across domains and markets.

A new Unmanned Systems Zone opens access to the latest advancements in autonomous technologies through a large static display and live demonstrations on a dedicated runway, a rare offering unique to WDS. The Naval Zone explores naval technologies on a deeper level, displaying innovations in vessels, AI, and cyber capabilities, whereas the dynamic Future Defense Lab serves as the cornerstone of innovation, gathering the industry's brightest minds alongside startups and leading innovators to network and witness groundbreaking technologies. Placing the Saudi market on the global stage, the Saudi Supply Chain Zone shines the spotlight on Saudi SMEs, startups and entrepreneurs to immerse with industry leaders.

In 2026, WDS builds on the momentum of previous successful editions, adding new features to elevate the event while retaining favored programs such as the Delegations Program and Meet the KSA Government. WDS 2026 will bridge connections between Saudi Arabia, regional markets, and global players, creating new opportunities for manufacturers and innovators. Unlocking networking and knowledge exchange opportunities that drive progress, the show will provide a platform for leaders, innovators, and decision makers to converge and shape the future of defense under a collaborative lens.

Join us at WDS 2026 from February 8-12 to experience the next level of defense. Don't miss the chance to witness never-before-seen advancements, engage in impactful discussions, and actively contribute in the conversations defining the future of global defense.

KAI'S GLOBAL CHALLENGE:

FA-50, KUH, AND THE VISION FOR THE FUTURE

At KAI's production facility, two FA-50 production lines are positioned alongside the KF-21 production line. The FA-50 is a versatile aircraft capable of serving as both an advanced trainer and a light combat aircraft. To date, KAI has secured contracts for approximately 300 FA-50 units with various air forces worldwide and currently holds a significant backlog of orders. These aircraft are slated for delivery to Indonesia, Poland, Malaysia, and the Republic of Korea Air Force (ROKAF).

Since achieving Initial Operational Capability (IOC) with the ROKAF in 2005, the FA-50 has trained more than 2,500 pilots over the past two decades, proving its reliability and effectiveness. Its supersonic performance and extensive weapons integration capabilities have positioned it as a cost-effective combat solution, drawing significant interest from global air forces. The FA-50 is already equipped to deploy precision-guided munitions such as JDAM and is evolving into an even more versatile multirole fighter with the recent integration of advanced targeting pods and laser-guided bombs (LGBs).

To extend its operational range, the FA-50 has been successfully integrated with 300-gallon external fuel tanks, and a probe-and-drogue aerial refueling system is expected to be finalized by the end of this year. Additionally, efforts are underway to enhance its combat capabilities and survivability through the integration of an Active Electronically Scanned Array (AESA) radar, Helmet-Mounted Display (HMD), and AIM-9X air-to-air missiles.

KAI is continuously upgrading the FA-50 through the development of a single-seat variant and integration with attritable multipurpose drones (AAPs). Additionally, it is working on equipping the aircraft with a Large Area Display (LAD) to enhance training effectiveness for fifth-generation fighter pilots. These advancements will enable the FA-50 to adapt to evolving combat environments and meet future operational demands.

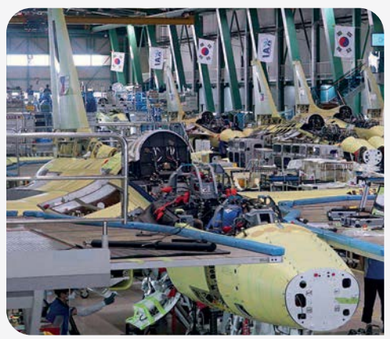
KAI has recently achieved a major milestone by securing its first international customer for its helicopter lineup, further expanding its presence in the global market. The KUH Surion, a multi-role helicopter, has been proven through the delivery of over 250 units to the Republic of Korea Army and Marine Corps, and also parapublic such as police, coast-guard. With the recent export contract, KAI expects further opportunities in the international market. The KUH is utilized not only for military operations but also for firefighting, emergency medical services, and search and rescue missions through various specialized variants.

Additionally, KAI recently held a delivery ceremony for the first Light Armed Helicopter (LAH) to the ROK Army. The LAH is equipped with state-of-the-art weapon systems and is expected to gradually replace the aging fleet of light attack helicopters currently in service with the Korean military.

KAI is committed to continuous research and development to meet the evolving demands of both the Korean military and international customers.

Through its participation in the IDEX exhibition, KAI aims to strengthen relationships with existing clients while engaging with new potential customers to explore future challenges and opportunities.

● To learn more about KAI's ongoing challenges and innovations, visitors are encouraged to stop by booth 06-A27, Hall6 at IDEX



Images: KAI

The KUH is utilized not only for military operations but also for firefighting, emergency medical services, and search and rescue missions through various specialized variants

Space leaders worry about evolving threats to spacecraft

TALKING SPACE
At the International Defence Conference on Sunday

Threats to spacecraft are proliferating as the domain becomes of growing importance to militaries around the world, space officials warned at the International Defence Conference (IDC) on Sunday.

"Space has become a domain for warfighting," Mohamed Alahbabi, Edge Group's senior advisor, space and cyber technologies, said at the event, adding that that is making it "subject to threats".

The biggest threat, he said, is from anti-satellite systems, while noting that cyber-attacks on ground infrastructure that are hard to pinpoint, jamming and space debris are other areas of concern. While there are natural threats to space systems, such as solar flares, Alahbabi said: "I think it's human made threats that loom in the future."

Capella Space CEO Frank Backes echoed the sentiment. "These are threats that we are seeing on a continuous basis. We're seeing threats against our satellites, in the terrestrial domain, in our ground infrastructure, coming through traditional cyber security threats, but we're also seeing threats in the RF domain, both against our command and control of our satellites, but also in the payload and direct intentional electronic warfare threats against our systems."

Capella Space, which provides synthetic aperture radar imagery from space, has had to upgrade its systems to harden them against attacks, he said. SpaceX previously also said it had to make changes to its Starlink satellite communications links after Russian attempts to disrupt its data provision.

Backes argues that with the lines blurring between military, civil and commercial space systems, dealing with threats requires a broad approach, likening it to the need for cyber protection more widely.

"How do we create our infrastructure just like we have in the terrestrial networking world, in using the Internet every day. We all operate in a high-threat environment on a continuous basis, whether it's on our phones, our corporate networks, or in our homes. We have to operate through this environment, and our space systems need to be architected and set up to operate in the same way," he said.

There are other areas of concern, too, from less nefarious sources. Elias Tsoutsanis, the acting chief researcher of the UAE's Propulsion and Space Research Center, Technology Innovation Institute said: "We're going to see space becoming much more congested."

The growing number of satellites in orbit could narrow launch windows to try to avoid them, he said, and is driving a need for improved space situational awareness.

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Emtan launches new weapon at IDEX

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Emtan Karmiel has chosen IDEX to launch its second-generation suppressor weapon, the MZ-4. The Israeli company manufactures small arms, guns and weapons.

"Based on the known M4-M16, our small arms are designed and manufactured according to MIL-SPEC to suit the utmost requirements of any army or police force," said Ron Pollack, VP sales and marketing (pictured left).

The company's rifles are used by homeland security and military forces world-wide.

"Our innovation in materials and processing technology using the most updated machinery results in a rifle that is more reliable, more accurate and more ergonomic than the standard issue rifles used by armed forces," said Pollack.

Emtan MZ-4 Parts are fully compatible with other M4 and M16 rifles. The company offers upgrading and converting kits for renewing used M16s/M4s.

Argus gets in a tangle

German start-up firm Argus Interception is at IDEX for the first time showing a counter drone technology that deploys a net to capture or take down drones.

Although initially developed to protect sites like airports, nuclear or army bases from drone incursion, the Argus Interceptor Counter UAS is finding a military application too and a "couple" have been in service with the Ukrainian armed forces for a "few months", said Sven Steingraeber, co-founder of Argus Interception.

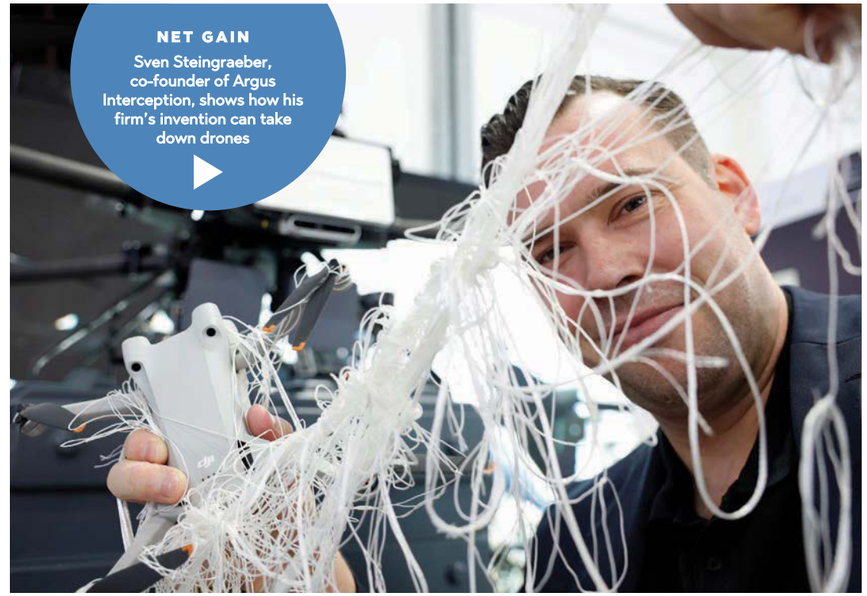
The Argus C-UAS was born after a team at Hamburg's military university responded to a German Ministry of Transportation study to develop an autonomous system to counter drones flying into unauthorised areas without shooting them down, said Steingraeber.

Following the study, and seeing the potential of the interceptor technology, the university team established Argus Interception to commercialise the product, said Steingraeber.

The Argus C-UAS, shown on its stand in Hall 7, D20, which has radar, LIDAR and other sensors coupled with sophisticated sensor fusion, has been in field testing with the German federal and state police for the past six months.

The Argus C-UAS can catch a drone of up to 8kg in its net and bring it down to Earth in a safe manner and away from an important site such as an airport runway, explained Steingraeber.

"The technology is also interesting for the defence market because the net is a threat for any propeller-powered drone and is very cost-effective with a low cost to kill ratio," he said. Although it cannot carry larger drones such as the Shahed it can bring them down, he added.



Test your shooting skills on AzSimX simulator

Visitors to IDEX can test their shooting skills by firing a gun on the AzSimX arms training simulator.

The Azerbaijani company has a range of firearms that can be used in the firing range, including the Russian-produced Kalashnikov 74.

"Our state-of-the-art firearms simulator recreates a small arms firing range indoors. It is aimed at training recruits to special forces and commandos.

"The simulator can be adapted to imitate a number of firearms to impart basic training, hone firing skills, improve weapon handling skills and tests the skill level of trainees in complex and war-like scenarios," said Seymur Mammadli, deputy director.

AsSimX's Seymur Mammadli with a Kalashnikov 74

Expanding relations with tank modernisation

A MEETING OF KNDS
A Leclerc MBT (right) alongside a Caesar howitzer

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With the UAE Armed Forces having acquired Leclerc main battle tanks more than 30 years ago, KNDS France (CP-320) continues to strengthen its presence in the country.

Reaffirming its support of the Emirati armed forces for the next three decades, KNDS France has structured a Leclerc main battle tank modernisation project in collaboration with key Emirati players, including Edge Group and BHE.

An ambitious offer has been under discussion with the UAE Ministry of Defence to elevate the Leclerc to an unprecedented level of performance. KNDS Emirates, the company's subsidiary in Abu Dhabi, was established to support the UAE's ambition to develop a strong and sovereign defence industry. The long-term goal is to provide localised services in the country and to establish co-development and co-production projects.

At IDEX this week, KNDS France is also showcasing its range of systems designed to ensure the operational superiority of the UAE. In 2024 the company demonstrated RAPIDFire in the UAE, the first remotely-operated 40mm turret integrating the CT40 gun. Artificial intelligence provides the platform with close-range self-defence capabilities against modern air and surface threats.

It features advanced electro-optics designed by Thales and the latest 40mm cased telescoped ammunition technology developed by CTAI, a subsidiary of KNDS France. The turret is designed to counter a wide range of threats, including ships, light aircraft, drones, loitering munitions, and missiles, up to a range of four kilometres.

Its 40mm gun is compatible with all cased telescoped ammunition, including the A3B airburst round, which is particularly effective in anti-aircraft warfare, whose development was recently finalised by DGA, the French defence procurement agency.

The battle-proven T25 version of the armoured infantry combat vehicle (VBCI) is armed with a 25mm M811 auto-cannon, a co-axial 12.7mm machine gun and GALIX close protection systems. The vehicle combines firepower and mobility.

Also on display is the CAESAR 6x6 Mk1 howitzer, which has demonstrated its effectiveness in both counter-insurgency operations and high-intensity conflicts. It is currently in service with 12 armed forces. KNDS resulted from the merger of Krauss-Maffei Wegman (KMW) and Nexter, two of the leading European manufacturers of military land systems based in Germany and France.

Saab showcases Coast Control Radar

With the Arabian Gulf a traditionally tense region and new threats to shipping having recently emerged in the Red Sea, it is appropriate that Saab chose to develop its new Coast Control Radar in the UAE.

The Swedish defence firm developed the radar at its research and development facility in Tawazun Industrial Park, Abu Dhabi, in an acknowledgement of its long-standing commitment to investing in the UAE's defence and security ecosystem.

"We chose to launch the radar in the Middle East where the safe and reliable transit of maritime waterways is of great importance," Saab's UAE managing director, Heléne Bittmann said.

Coast Control Radar (pictured right) is a next-generation, non-rotating, software-defined radar whose phased array design allows for 360-degree coverage.

The compact, modular design incorporates advanced detection capabilities for small, fast-moving objects in potentially cluttered coastal environments, Saab said.

This is valuable in a region where small, asymmetric threats pose a very real danger. In January 2017, the Saudi frigate Al Madinah was struck by an explosives-laden uncrewed fast launch operated by Houthi rebels off Yemen, resulting in the deaths of two crewmembers and significant damage to the warship. The safeguarding of territorial waterways and maritime traffic is increasingly important to the safety and security of vessels, national sovereignty and the wider global economy. Persistent Houthi missile and drone attacks on merchant shipping in the Red Sea have forced many vessels to undertake the lengthy diversion around the Cape of Good Hope, rather than using the Suez Canal.


BillyPix

Designed for easy integration into infrastructure such as buildings, towers, and waterway bridges, the Coast Control Radar offers flexible installation, Saab said. Its modular design minimises installation problems while its software-based approach offers routine software upgrades as well as high levels of automation.

● See tomorrow's *Show Business* for a 'From the Top' interview with Saab's Heléne Bittmann

Daily news updates on timesaerospace.aero

BAE's amphibious vehicle makes international debut

OPEN_OCEAN CAPABILITY
IDEX debut for BAE Systems' versatile ACV

BAE Systems (Stand 03-C10) is showing its amphibious combat vehicle (ACV) for the first time at IDEX 2025.

Born out of a combination of BAE Systems' amphibious legacy and Iveco Defence Vehicle's long history of producing multi-purpose armoured vehicles, the ACV has been designed to operate in the most rugged and challenging terrains. BAE Systems believes it is an ideal solution for militaries around the world.

In active service with the U.S. Marine Corps, the ACV brings together open-ocean amphibious capability and mobility for the most challenging land terrain. It has the ability to operate seamlessly in the surf zone and adapt to mission-specific requirements, including those of the Middle East region.

"The UAE is a key partner for BAE Systems, and we are committed to supporting the country's thriving defence industry and its vision for a secure and prosperous future," said Jonathan Bird, UAE country director at BAE Systems.

"Through our partnerships with governments, industries and armed forces across the Middle East, we're delivering advanced technologies and solutions that address evolving security challenges and support the development of sovereign capabilities."

With the platform's unparalleled flexibility and capability, the ACV can enhance humanitarian assistance disaster relief (HADR) preparedness. By providing deployable assets capable of navigating flood zones and other challenging environmental conditions this vehicle delivers supplies and personnel to affected areas.

BAE Systems is also showcasing its Herne modular extra-large autonomous underwater vehicle (XLAUV) to operate in the underwater battlespace, and Azalea Cluster, a next-generation space solution that will deliver advanced satellite capabilities for secure and resilient communications.

Further evidence of the company's commitment to helping develop sovereign capabilities and creating highly-skilled jobs, is Project OdySSEy and CanDLE, a synthetic training capability designed to enhance mission readiness through immersive, realistic scenarios.

A cyber interactive demonstration explores BAE Systems' expertise in cyber defence, including advanced tools for mission-critical operations. In terms of electronic warfare and precision targeting, visitors can see several exhibits, including the APKWS laser guidance kit, GXP geospatial intelligence software and the Striker II helmet-mounted display.

SNT Motiv in the firing line

South Korean firearms and auto parts manufacturer SNT Motiv is displaying its range of guns, including its K6 12.7 x 99mm (NATO).

"The K6 is a heavy machine gun, which is currently been used in the Korean Armed Forces, as well as with a customer in the Middle East," said Juhyun Son, executive director.

"We also have on display the K4 40 x 53mm automatic grenade launcher, which is suited for light infantry vehicles and tripod applications. This can penetrate two inches of armour at 2,000 metres with 15 metres blast and fragmentation effect.

"We have a strong Middle Eastern customer base for this," said Son.

Juhyun Son, executive director with the K6

Kalashnikov displaying KUB-2-E

Russia's Kalashnikov is displaying its small-class and medium-class KUB-2-E guided loitering munition for the first time at IDEX. The KUB-2-E is an advanced joint development project of the company along with Izhevsk Unmanned Systems Research and Production Association. The small-class KUB-2-E system is designed to eliminate enemy personnel and un-armoured military vehicles. The medium-class KUB-2-E has a broader range of applications engineered to strike enemy personnel, launch sites for UAV systems, and helicopter bases, as well as unarmoured and lightly-armoured military equipment. Both small and medium-class drones are equipped with electro-optical systems that enable operators to guide the munitions to targets even if they change locations.

Uncrewed naval vessels are expected to be a major focus at this year's IDEX. Alan Dron writes

Uncrewed boats and subs are the next big thing

Both surface and sub-surface vessels are starting to make their presence felt in the world's navies. They offer the possibility of navies being able to bulk out their fleets at much less cost than crewed vessels. This lower cost could be appealing for smaller navies with restricted defence budgets and give them the potential to threaten much larger adversaries.

They also offer the possibility for navies to have a presence in high-risk areas without risking valuable crews. China, which is increasingly in the vanguard of defence innovations, has recently unveiled the world's largest uncrewed surface vehicle (USV), the JARI-USV-A, known as Orca (killer whale).

Models of the vessel have been seen at defence exhibitions for several years, but the real vessel broke cover at last year's Zhuhai Airshow. Details of the vessel remain scant, but according to Chinese media, it weighs in at around 500 tonnes – around three times the size of the US Sea Hunter USV (of which little has been heard in recent years).

Speculative venture

The Chinese vessel, by contrast, appears to be, if not an operational vessel, then at least an advanced development model, although it is not known if it has been developed in response to a Chinese navy requirement or developed as a speculative venture.

Chinese reports say that the vessel is capable of 40kts and has a range of 4,000nm. Photographs of the vessel show a large mast with several built-in electronically-steered radars and other sensors. It has a vertical launch system for at least four missiles, recessed torpedo tubes, and an aft helideck for small uncrewed helicopters.

Latest photographs show the vessel sporting an HN-10 short-range surface-to-air missile (SAM) system immediately aft of the mast. If the models shown at IDEX 2023 are still valid, there is also a retractable remote weapons station within the long foredeck.

Western USVs currently remain much more modest, but European defence manufacturer Thales delivered the first serial production system of mine countermeasure (MMCM) drones to the French Navy in December 2024.

Thales claimed the delivery as a world first, as part of the Franco-British MMCM program, led by the French Defence Procurement Agency (DGA). The system is designed to reduce sailors' exposure to danger during the traditionally risky process of mine clearance.

> **"According to Chinese media, [the Orca] weighs in at around 500 tonnes – around three times the size of the US Sea Hunter USV"**

The system delivered to the French Navy includes a 12-metre USV equipped with TASM-towed sonar for the detection and classification of mines. The USV's operations can be controlled from land, from a mother ship, or from an opportunistic vessel, allowing MMCM duties to be carried out while reducing crew exposure to danger.

Air Transportable

The USV is designed to be air transportable, allowing for deployment anywhere in the world within 48 hours aboard an Airbus A400M heavy transport aircraft and can be embarked on the future mine warfare vessel (BGDM).

As the systems provider and integrator for the MMCM program, Thales already has several MMCM solutions, such as the SAMDIS multi-view sonar, the portable e-POC operations centre, the M-Cube mission management system, and the Mi-Map data analysis application.

Within the French navy's SLAMF programme, France will receive six USVs in 2025: three system-of-systems, each comprising two USVs, will be delivered to the navy, in addition to the prototype system that has already been delivered and updated.

The UK Royal Navy will also receive four system-of-systems, each consisting of one USV, during 2025.

"The United Kingdom and France have set an ambitious goal: to transform their mine countermeasure capabilities by adopting new disruptive operational concepts," said Thales Defence Mission Systems' executive vice-president Philippe Duhamel.

"Thales is proud to be at the heart of this transformation, which positions both nations as pioneers in autonomous naval systems. Our group, a world leader in mine countermeasures, reaffirms its position as an innovative and reliable partner that navies can count on to develop their strategic capabilities." ▲

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CHINA'S ORCA
China recently unveiled the world's largest uncrewed surface vehicle (USV), the JARI-USV-A, known as Orca (killer whale)

Protect your head

Helmets for the military have been part of a combatant's equipment for millennia. Small wonder global company Galvion (Stand 14-C31) has announced the receipt of several recent orders from the Middle Eastern region for a total of 35,000 Batlskin helmet systems.

The head systems ordered are split between Galvion's Batlskin Viper and Batlskin PDxT variants. While specific details are unknown, a trusted regional partner of Galvion's is amongst the most recent customers that has placed orders for more than 100,000 helmets in the last 10 years for use by armed forces and security services in the region. Galvion's Batlskin Viper A1 Special Edition is a high-cut advanced combat helmet-shaped (ACH) aramid helmet, specifically developed for a regional customer in coyote brown, with a custom camo helmet cover and a bespoke helmet bag.

Elsewhere in the region, further orders were received for Galvion's Batlskin PDxT helmet. The battle-proven PDxT platform in multiple variants serves across international helmet programmes.

It features an ACH-front with smooth ear transition and a ridged back, offering structural rigidity, increased rear ballistic protection and improved impact protection.

Both helmet systems on order feature Galvion's customisable, comfort-fit modular suspension system (MSS), designed for maximum comfort, stability, air circulation, and protection during long periods of wear.

"These most recent orders are a testament to Galvion's successful relationships and long history of supporting our Middle East customers," said Alex Hooper, vice president strategic markets.

"We're excited to be able to make this announcement at IDEX, where the full breadth of our capabilities is on display. This includes our portfolio of head systems, as well as our expanded Nerv Centr power and data management solutions."

Galvion is privately owned with accredited facilities in the US, Canada, the UK, and Poland.

Galvion

▲ Galvion's Batlskin VIPER A1 special edition helmet

Royal opening for new Thermoteknix facilty

Thermoteknix

◀ Britain's HRH The Princess Royal presents Dr Richard Salisbury with the King's Award for Enterprise trophy

It's been a busy few weeks for IR thermal imaging specialist Thermoteknix, having inaugurated a new UK electro-optics facility just days before attending IDEX.

The new site will support the Cambridge-based company's growth and increased demand for thermal imaging products by armed forces across the world, augmenting offices in the USA, Singapore and India.

The opening ceremony was overseen by HRH The Princess Royal, who as well as touring the premises, presented Thermoteknix with the King's Award for Enterprise trophy for Innovation.

To date, the company has received five such King's and Queen's Awards, formally recognising its innovation and sales success in overseas trade – with all its products designed, manufactured and sold from the UK.

Noting his gratitude at receiving "one of the UK's most prestigious awards," Dr Richard Salisbury, Thermoteknix managing director, said the accolade was "testimony to the skills, dedication and commitment" of the company's 75 staff; a number set to rise in the year ahead as Thermotechnix's product line also expands.

Having developed thermal imaging cameras from Formula 1 to anti-ballistic missile applications, Thermoteknix's groundbreaking NASA-commissioned camera also confirmed the presence of water on the moon in 2009.

SECURING THE SKIES FROM DRONE THREATS

In modern warfare, the value of UAS has been seen in recent conflicts. The use of highly manoeuvrable Unmanned Aerial Vehicles (UAVs), capable of flying at slow speed and low altitudes, is challenging the protection of land forces deployed closer to the frontline in theatres of operations.

Their size, speed and agility, but also the possibility to deploy these systems in high quantities, is now adding to the saturation of the frontline airspace, bringing uncertainty and additional challenges

This has wider implications, notably the need for counter-UAS (CUAS) systems that can detect, identify and, when necessary, neutralise malicious drones.

Counter-UAS is a system discipline, where you must align different types of capabilities to be able to assess the proper situation to protect against it, and potentially neutralise if it is a real threat.

Counter-UAS is a system discipline, where you must align different types of capabilities to be able to assess the proper situation to protect against it, and potentially neutralise if it is a real threat...

HERVE DAMMANN

E-TRAP, an Electromagnetic Directed-Energy Weapon is used for Drone Neutralisation.

Compact and mobile, E-TRAP intervenes at the end of the chain, after a threat has been detected by a C2 and tracked by the integrated system. Particularly frugal with low power consumption, the system promises up to several hundred shots before recharging the batteries.

E-TRAP can disable the threat on-board electronics by using directed powerful electromagnetic waves to secure critical sites, major events, against small drones, even autonomous ones and swarms attacks. Designed for military and security forces, the solution is mobile, lightweight with easy deployment configurations while offering human in the loop or fully automatic modes to neutralise drones.

It enables to ensure personal and equipment safety with an angular, selective and very short time on target action. This system can be used individually or can be integrated within other anti-drone systems, allowing the end-user to adapt the technology to their specific environment and requirements.

Whether it is at a military base, or installed for a large public event or on a military vessel, the electromagnetic effector will be highly relevant and adaptable to the operational case.

Loitering munitions are also part of the new threats, akin to armed drones for Ground-to-Air defence missions. These drone threats justify the use of anti-air capabilities such as "Very Short Range" gun systems , in addition to "Short Range" missile systems.

A multirole artillery gun provides the capability for multiple and precise engagements against the quantity and simultaneity of threats, even at very close range, at a cost-effective rate due to the low cost of shells and the ability to adapt shell types to the threat.

The RAPIDFire system provides unique control capabilities.

The RAPIDFire, Thales multirole artillery gun meets the need for Very Short Range defence against multiple and varied threats between 50 meters and 4,000 meters, such as those posed by aerial and surface drones (of which use is expected to multiply), as well as light aircraft, helicopters, and missiles.

The RAPIDFire system is a cannon system developed by Thales and KNDS that integrates a 40mm cannon and ammunition developed by CTAI (a subsidiary of Nexter Systems and BAE Systems).

It can be installed on various land platforms, which will provide mobile tactical protection for forces in land combat, for logistics supply convoys, or for the protection of sensitive assets (command posts, radar systems, SAMPT battery, etc).

The RAPIDFire system on a ground vehicle can be coordinated within a complete Ground-to-Air defence system, but it can also operate independently through its own acquisition and fire control capabilities.

Triggered by conflicts and the necessity to stay one-step ahead of the opponent, the military have been on a permanent quest for speed of execution, for operational superiority, and for the kind of disruptive technologies and features that will surprise and disarm their adversaries.

Drones are evolving, with new directions and capabilities, so we have to adapt to the new types that are appearing.

Such advances would ultimately reduce the burden on the operator and boost their advantage in the C-UAS challenge. ●

Multi-mission transport

Embraer hopes C-390 will become hot property, writes Mark Pilling

HIGH HOPES

Embraer says the C-390 has been designed to cope with the demanding hot and harsh operating scenarios found in the Middle East

Embraer is also highlighting the strong selling A-29 Super Tucano at IDEX

Embraer arrives at IDEX confident that the European and Far East sales success of its C-390 Millennium multi-mission transport aircraft will soon be replicated in the Middle East.

The Brazilian manufacturer sees an "urgency" from air forces in the region to update and upgrade their tactical airlift capabilities and is optimistic the C-390 offers a modern platform to succeed and a more capable operational platform compared to legacy aircraft like the venerable Lockheed C-130.

The C-390 first flew in 2015 and entered service with the Brazilian Air Force in 2019. It is now operating with the air forces of Brazil, Hungary and Portugal, and has been selected by several other European countries and South Korea.

Media reports say that countries in the Middle East and Africa such as Morocco, Egypt, Saudi Arabia and the UAE all have interest in an aircraft of the C-390's size and capability.

Speaking to *Show Business* ahead of IDEX, Frederico Lemos, commercial officer for international business at Embraer Defense and Security, would not be drawn on the requirements or procurement timelines of specific countries, but noted: "When air forces look at the C-390 they see flexibility, high availability and the low cost of operations.

"The aircraft's open architecture is also key enabling it to receive additional [mission] capabilities and address different challenges throughout decades of future operation," said Lemos.

"We also believe the C-390 is fit for the demanding operating scenarios in the Middle East. A key concern addressed early on when we thought about the aircraft is its ability to operate from hot and harsh locations as is its ability to operate to and from unpaved runways," he said.

The ability of the C-390 to take on a variety of missions is an attractive feature for operators. "Every C-390 that comes off the production line is aerial refuelling capable. So, you can perform a special or logistics mission in the morning and then conduct air-to-air refuelling in the afternoon with the same platform," explained Lemos. "It is this flexibility, together with its advanced technology, that differentiates the C-390 from the other market options," he believed.

Another important feature of the C-390 is its advanced, passive and active, self-protection system. "Sometimes there is the need to operate in contested environments and the survivability of the aircraft is very important for the region," said Lemos.

The fly-by-wire C-390 is powered by two IAE V2500-E5 turbofan engines and is fast approaching 16,000 flight hours in air force operation with a 99 per cent mission completion rate.

Embraer has multiple discussions with air forces globally about the C-390 as many look for next generation tactical transport solutions. "We see a global market for around 460 aircraft in this category over the next 20 years," said Lemos.

In addition to promoting the C-390, Embraer is highlighting its A-29 Super Tucano at IDEX. With over 290 aircraft ordered and 580,000 operational flown hours this single-engine type remains a highly relevant and flexible platform for air forces worldwide, said Lemos.

"We are also seeing interest in the region for our business jets for governmental entities and special missions," he noted. "The entire portfolio of Embraer's aircraft – pure defence, executive and commercial – are in the realm of possibility for business under the [Embraer] Defense umbrella."

"Over last 20 years we have certified 30 platforms. This might be a record for an OEM.We are blessed to have a very prolific engineering and industrial capability, and an amazing array of platforms available to address different customer needs," Lemos concluded. ▲

"When air forces look at the C-390 they see flexibility, high availability and the low cost of operations"

FREDERICO LEMOS EMBRAER

Images: Embraer

Anti-drone systems

With the serious threat attack drones increasingly pose in modern conflict, military forces are scrambling for effective countermeasures. UAE-based Mersad Technologies is showing an innovative solution at IDEX 2025 this week, reports Sam J Basch

Bringing down takedown costs

"The Centauri TriAD drone protection system on display here is not only extremely effective, but arguably one of the most cost-effective available," said Dr Nahyan Almansoori, chairman of Mersad Technologies (Stand C2- 009).

"Most other anti-drone systems on the market today are prohibitively expensive, but seeing that the evolving threat is high, defence forces are left with no choice. I'm confident the Centauri system is the best comprehensive option to consider, especially as it will significantly decrease the takedown cost."

According to Gert Rossouw, Centauri chief executive officer, the TriAD drone protection system integrates kinetic and sensor-based technologies to detect, track, and neutralise incoming drones with high accuracy and efficiency.

"Our aim is to enhance defence forces' drone protection regime with a new standard of combat readiness and robust defence capability against unmanned aerial threats," Rossouw said.

Hard kill capability

Offering the advantages of hard kill capability, the Centauri TriAD system is based on the company's proven CRx-30 ROWS weapon firing 30 x 113mm programmable air-burst ammunition.

"Layered sensor fusing underlies the system by first utilising RF-ID and radar to detect incoming drones from a distance. It identifies the threat based on pre-registered tags," Rossouw said.

"Optical sensors are employed to visually confirm and track the drone's movement, followed by assessment of the threat level. Depending on the threat's range and the tactical scenario, the target is then engaged and eliminated," he explained.

The Centauri TriAD system, developed in South Africa, can be integrated on armoured vehicles, naval vessels or as static installations, such as around airfields, military bases and the like. Its compact and low weight design allows for integration even on light vehicles. This enhances interoperability with allied forces.

"Simply put, the TriAD operator starts firing at an incoming attack drone – or drone swarm – when the tracking system determines a high kill probability of, say 80 per cent," Rossouw said.

"As the weapon fires the programmable 30 x 113mm ammunition in short bursts at the exceedingly high rate of 30 rounds per second, a veritable curtain of steel is raised at successive intervals ahead of the approaching drone, thereby destroying it. The TriAD's effective range starts at 2,000 metres, but a higher kill rate is achieved at closer range.

Arranged around the main weapon are three Centauri's MB6-40 multi-barrel grenade launcher systems to provide a further layer of protection. With this complementary weapon suite, the operator can launch volleys of 40 x 51mm medium-velocity (MV) grenades to provide a close-in protective dome above the weapon station. Although the MV ammunition has an effective range of 900m, it offers protection as close as 50m against the enemy drone attack.

Throughout the mission the operators remain under armour within the vehicle or other platform to control the ROWS, thanks to the remote-control functionality of the TriAD system.

Extensive experience

"Mersad Technologies has partnered with Centauri for their extensive experience in the conceptualising, design and development of military products for the international defence industry," said Dr Nahyan Almansoori. "Centauri offers turnkey product development, from idea to production, and service. Besides a full range of mechanical and electronic design services, Centauri specialises in weapon and turret systems, all of which complements our own offerings."

He pointed to Mersad's portfolio of advanced technology-based risk, security, monitoring, and surveillance solutions. With its focus on innovation, Mersad Technologies innovates by using existing and advanced technologies to solve risks, security, and surveillance problems, be it for governments or private sector clients.

"Of particular importance in this region are strategic assets, such as oil and gas installations, pipelines and oil rigs, as well as airport facilities, harbours and other maritime infrastructure," Almansoori explained.

At IDEX this week, Mersad is also displaying a range of other weapon systems and related equipment. ▲

Mersad

PLANE TALKING: TYPE P2P-2025

The Green Power Type P2P-2025 has a robust all-metal structure, high wing design, and fixed landing gear, making this light transport aeroplane an excellent choice for multiple aviation sectors: including training, regional travel, medical transport, and light cargo operations. ts versatility, safety, and ease of use make it a valuable asset in the general aviation market.

DESCRIPTION OF THE LIGHT TRANSPORT AIRPLANE

All-metal primary structure
The aircraft is constructed primarily from metal, which provides durability, strength, and ease of maintenance. The all-metal design enhances structural integrity and can withstand the rigours of various operations.

High Wing configuration advantages
- Improved stability and visibility for pilots and passengers.
- Better ground clearance for the engines and landing gear.
- Enhanced lift characteristics are beneficial for short takeoff and landing performance.

Fixed Landing Gear
Fixed landing gear design simplifies maintenance and reduces weight, making it ideal for training and shorter regional flights. While retractable gear can improve aerodynamics, fixed gear is generally more robust and easier to manage, especially for training.

VERSATILE USE CASES

Primary training The configuration suits flight schools, allowing students to learn basic piloting skills in a safe, manageable aircraft.

Regional transport It serves as a dependable option for short-distance passenger transportation, accommodating up to eight seats arranged in a 2+6 configuration.

Ambulance services The spacious cabin can be adapted for medical evacuation and equipped with necessary medical equipment and space for a stretcher.

Cargo Transport The aeroplane can also function as a light cargo carrier, with a significant payload capacity to handle various cargo types.

Design features All metal primary structure, high wing, fixed landing gear, primary training, regional transport, ambulance, training, cargo, eight seats (2+6) normal category CS-23 (n=+4/-2g)

Flying controls Dual control, mechanical and fly-by-wire

Landing gear Tricycle, Leaf spring main landing gear

Power plant Two SMA (SR305-2000) MT Propeller

Weights & loadings
- Weight empty [kg] 1100
- Max T-0 weight [kg] 2150
- Payload weight [kg] 750
- Max wing loading [daN/m2] 120

Performance
(at max weight except where indicated):
- Never-exceed speed (Vne) [km/h] 430
- Max level speed at sea level (S/L) [km/h] 380
- Max cruising speed al S/L [km/h] 320
- Stalling speed flaps down [km/h] 105
- Max rate of climb at sea level (S/L).[m/s] 7.5
- Time to 600 m (1.970 ft). 75% power, [s] 80
- Take off run [m] 165
- Take off to 15m (50ft) [m] 400
- Landing from 15m (50ft) [m] 420
- Landing run [m] 160
- Range with max. fuel [km] 1200

● Find us on booth 07-D45

Green Power

Eurofighter

Jon Lake looks at the appointment of the new CEO at Eurofighter and looks at the challenges he faces

Eurofighter gets a new boss

Jorge Tamarit Degenhardt has been appointed as the new CEO at Eurofighter Jagdflugzeug GmbH, the industry management company for the consortium building the Eurofighter Typhoon. His appointment was announced on January 7, 2025.

Eurofighter has a three-year rotation policy, under which leadership roles are 'rotated' between the four partner nations (the UK, Germany, Italy and Spain, and the partner companies of Airbus Defence and Space (Germany and Spain), Leonardo (Italy) and BAE Systems (UK).

Degenhardt is a dual Spanish/German national, and is joining Eurofighter from Airbus Defence and Space, where he has spent the past two decades, rising through the company's management structure and holding a variety of international executive roles.

Degenhardt led the Airbus C295 India programme where he oversaw the largest C295 order in history, while establishing India's first private-sector aerospace and defence end-to-end production system.

Programme head

He is no stranger to the Eurofighter programme, and has extensive Eurofighter experience at different levels, culminating in being the programme head for Spain, leading all activities related to the Airbus contribution to the Eurofighter consortium.

He succeeds Giancarlo Mezzanatto who has returned to Leonardo S.p.A. Under Mezzanatto, Eurofighter GmbH booked 72 new orders (three for Austria, 25 for Spain, 20 for Germany and 24 for Italy) and launched development of the EK electronic attack variant for the Luftwaffe, while overseeing a host of improvements, upgrades and new weapons integrations.

As Mezzanatto cleared his desk, the consortium was in advanced negotiations for 40 aircraft for Türkiye, 12 more aircraft for Qatar, and for two 54-aircraft requirements for the Royal Saudi Air Force, with the real possibility of sales to Egypt, Poland, Colombia and India.

Fairly or unfairly, the success of Degenhardt's tenure as CEO is likely to be judged according to how many of these potential sales are transformed into firm orders.

Some are already concerned at the lack of 'sovereignty' in the iteration of new mission data loads for the F-35, and the slow 'mission data cycle', which contrasts with the class-leading mission data agility of Typhoon.

Impressive new electronic warfare and electronic attack capabilities are claimed to represent a kind of 'digital stealth' that will allow tomorrow's Typhoon to be able to operate within even the most heavily contested battlespace, in just the same way as the low observable (stealthy) F-35 can.

Success will also be measured according to the delivery and embodiment of planned upgrades, the incorporation of new technology, and the integration of new weapons. Specifically, these include the so-called phase 4 enhancement (P4E) SD (system definition) package, and the Eurofighter long term evolution, whose 'part one' technology maturation phase (TMP) contract was signed in December 2024.

The LTE will be the major midlife upgrade for the Eurofighter, bringing several major enhancements to the aircraft, its sensors, human machine interface and systems and especially to its avionics architecture.

Critical time

The LTE aircraft will handle large amounts of data, much faster, allowing it to remain operationally effective into the 2060s, and to serve as a bridge to the new sixth-generation fighters.

Degenhardt greeted his appointment by saying that: "I'm extremely proud to join and lead Eurofighter – without question, one of the world's leading weapons systems – at this critical time for European security and sovereignty. I look forward to working with all our stakeholders to ensure that the Eurofighter programme continues its impressive track record on the order side, and at the same time delivers the state-of-the-art capabilities our air forces need in today's and future combat."

Richard Hamilton, chair of the Eurofighter supervisory board, said: "On behalf of the supervisory board, we are delighted to welcome Jorge to Eurofighter as the new chief executive officer.

"Jorge brings significant leadership experience to the company – from the wider defence industry as well as Eurofighter programme – which will be of great value as more orders continue to be placed, and more Typhoon aircraft delivered, during the coming decade." ▲

"I look forward to working with all our stakeholders to ensure that the Eurofighter programme continues its impressive track record on the order side, and at the same time delivers the state-of-the-art capabilities our air forces need in today's and future combat"
JORGE TAMARIT DEGENHARDT

Eurofighter

With a defence industry agreement signed with Hungary, the launch of a new offshore patrol vessel and a radar J-V with Indra, Edge is making strong progress, writes Alan Warnes

Edge pushes for more international agreements

Edge has come a long way in six years, transforming into one of the main 'disruptors' to the established names in the defence industry.

There have been many milestones over that time, and another one was reached on January 29, when managing director and CEO Hamed Al Marar signed a letter of intent with the Hungarian Ministry of Defence to co-operate on 'defence innovation, and research and development initiatives'.

It came during a high profile visit by Hungarian prime minister, Victor Orban. Al Marar provided some insight into what this meant: "We look forward to building on this momentum with further collaboration by supplying Caracal sniper rifles to the Hungarian defence forces, marking the first time Edge will provide such systems to a NATO member state."

Earlier in the month, on January 14 a much bigger ceremony ushered in the launch of the first Falaj 3 offshore patrol vessel (OPV), at the Edge-owned Abu Dhabi Ship Building (ADSB) shipyard.

The launch marks a pivotal phase in fulfilling the contract with the Ministry of Defence (MOD), paving the way for an advanced fleet of vessels designed to enhance national defence capabilities.

According to Edge, the 60-metre Falaj 3 OPV is capable of operating in both littoral and blue waters. The design has a reduced radar cross-section, infrared signature and acoustic signatures to provide a stealthy profile at sea.

In May 2021, ADSB was awarded an AED 3.5 billion ($950 million) contract by the UAE Ministry of Defence and the UAE Navy to build four Falaj 3-class OPVs. This is the largest order the company has ever received.

The 60-meter vessels will be based on the Fearless-class patrol boats from Singapore Technologies (ST) Engineering.

David Massey, CEO of ADSB, said: "The launch of the first Falaj 3 vessel reinforces ADSB's expertise in shipbuilding and represents a major step forward in delivering cutting-edge, highly-sophisticated vessels equipped with the latest mission systems and advanced armament. This underscores our commitment to supporting the strategic objectives of the Ministry of Defence [and the UAE Navy]. As we deepen this partnership, we remain focused on driving innovation and excellence to meet the evolving needs of the nation's defence landscape."

Edge acquired a 49 per cent share in ADSB from Emirates Defence Industries Company in July 2020. At the last IDEX/NAVDEX in 2023, the company announced it had been awarded a AED 175 million ($48 million) contract to build 120 fast inshore platforms (FIPs) and 160 inshore tactical engagement platforms (ITEP) for the Critical Infrastructure and Coastal Protection Authority (CICPA).

This marked the first local order of the company's UAE-made vessels designed for both near shore rescue and extended search and rescue (SAR) missions. Designed and built by ADSB in the UAE, the 120 FIP and 160 ITEP are used for high-speed pursuit, fast interception, and a diverse range of general patrol missions.

In December 2024, Spanish IT and defence systems firm Indra Sistemas and Edge agreed to establish a joint venture to develop radar systems in the UAE.

Called Pulse, the Abu Dhabi-based outfit aims to foster local capabilities for the design and manufacture of state-of-the-art radar systems, supported by a robust order pipeline from existing and potential customers in high-potential markets worldwide. ▲

ADSB launched the first Falaj 3 offshore patrol vessel at its Abu Dhabi shipyard on January 14

The Falaj 3 moored at the show

Edge

EDePro artillery rockets:
Advanced technology capabilities

DePro's innovative thermoplastic composite propellant represents a significant advancement in the technology behind artillery rockets, offering several key capabilities and benefits

KEY BENEFITS OF THERMOPLASTIC COMPOSITE PROPELLANT

Enhanced Performance Thermoplastic composite propellants can improve burn rates and specific impulse compared to traditional propellants. This can lead to greater thrust and efficiency, resulting in better performance of the artillery rockets.

Reduced Weight These propellants typically have a lower density, which can reduce the overall weight of the rocket system. A lighter rocket can enhance range and manoeuvrability, allowing for more effective deployment.

Improved Stability and Safety Thermoplastic composites can offer enhanced chemical stability and lower sensitivity to temperature changes. This makes the propellant safer to handle and store, reducing risks associated with traditional propellant materials.

Manufacturing Flexibility Thermoplastic materials can streamline manufacturing, allowing for easier shaping and processing than conventional propellants. This can lead to lower production costs and faster turnaround times.

Customization Thermoplastic composite propellants can be tailored to meet specific operational requirements, allowing for customized solutions for various types of artillery systems.

Environmental Advantages These materials may have less environmental impact compared to some traditional propellants, contributing to cleaner production processes and potentially reducing emissions associated with artillery operations.

Conclusion EDePro's development of thermoplastic composite propellant enhances the capabilities of their artillery rockets by improving performance, safety, and manufacturing efficiency. This innovation positions EDePro as a leader in advanced rocket propulsion technologies, catering to the evolving needs of modern military applications. By integrating this advanced propellant technology into their systems, EDePro is advancing the effectiveness and reliability of artillery solutions in the defence sector.

SUMMARY OF KEY INNOVATIONS

EDePro's presentation on its unguided artillery rocket program highlights significant advancements in artillery technology, particularly with the introducing of the Hurricane 262mm system and the enhanced 122mm rocket offerings.

122MM ARTILLERY ROCKET PORTFOLIO

G-2000 SL & SL+ Models These rockets represent an upgrade to the traditional 122mm GRAD rocket system.

Extended Range The G-2000 SL and SL+ rockets offer double the maximum range compared to the original GRAD rockets. This significant improvement allows for the engagement of targets at greater distances, increasing operational flexibility and strategic advantage.

Business Impact The positive feedback from the presentation indicates a strong interest in EDePro's innovations, which could lead to valuable business partnerships and opportunities in the defence sector. The advancements in artillery technology enhance military capabilities and position EDePro as a leader in the unguided artillery market.

HURRICANE 262MM SYSTEM

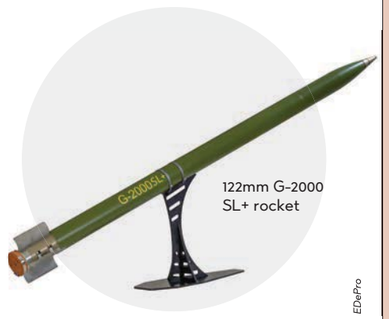
Type Surface-to-surface artillery rocket.

Precision The Hurricane boasts enhanced long-range precision capabilities, making it highly effective for targeting specific objectives with improved accuracy.

Efficiency: Enhanced efficiency at target engagement ensures that the rocket's impact is optimized, potentially reducing collateral damage and better resource utilization.

Conclusion EDePro's continued commitment to innovation in artillery systems, exemplified by the Hurricane 262mm and enhanced 122mm rockets, strengthens its portfolio and offers advanced solutions for modern military needs. This progress could be crucial to future armed forces' operational effectiveness.

● Find us on booth 07-D45



EDePro

Manned-Unmanned Rafale

M-UM's the word for an increasing number of air forces, is the UAE going to follow suit? Alan Warnes writes

Is Edge's Jeniah UCAV right for Rafale?

Manned-Unmanned (M-UM) operations is an aspiration for increasing numbers of air forces. Dassault, Eurofighter and Saab in Europe are studying options for their customers and it wouldn't be surprising if the UAE was planning such a philosophy for the near future, possibly with a version of Edge's new Jeniah unmanned combat aerial vehicle (UCAV).

It won't, of course, be integrated into their 80 new Rafale F4s, as they are expected to start being delivered in late 2026, which would be too soon. Going down the 'loyal wingman' route though will undoubtedly be on the minds of the UAE Air Force & Air Defense (UAEAF&AD) leadership.

Dassault is integrating a version of the nEUROn UCAV on the Rafale F5 version. On October 8 last year, Sébastien Lecornu, French minister of the armed forces and veterans affairs, announced the development launch of the UCAV that would complement the future Rafale F5 standard after 2030. "This stealth combat drone will contribute to the technological and operational superiority of the French Air Force by 2033," Lecornu said.

This UCAV will be complementary to the Rafale and suited to collaborative combat, incorporate stealth technologies, autonomous control (with man-in-the-loop), internal payload capacity, and more. It will be highly versatile and designed to evolve in line with future threats, benefiting from the achievements of the nEUROn program, Europe's first stealth UCAV demonstrator.

Edge, the UAE's biggest aerospace business, is known to be integrating its own precision-guided munitions like Al Tariq and Thunder onto the Rafale F4, but could also be planning in the future to do the same with a derivative of its Jeniah UCAV unveiled at IDEX in February 2023.

The 'Loyal Wingman' will be part of the Rafale F5's armoury by early 2030s, but could the UAE be looking to put the Edge Jeniah on the Rafale at some point?

The stealthy-looking UCAV hasn't flown yet, but as an Edge source back then said: "It should fly in around three years from now." Edge's managing director, missile and weapons Saif Al Dahbashi, said of Jeniah at the Bahrain International Air Show in November 2024: "It is a very exciting programme, it's one of our newest products and once it flies will undoubtedly be one of the company's flagships."

On M-UM training, USAF AFCENT commander, Lt Gen Derek France spoke at the Manama Air Power Symposium in Bahrain during early November on the importance of this new way of solving the lack of combat mass that would be a much cheaper option than buying new generation fighters.

"One way to mitigate the threats to manned aircraft and expand the decision space for pilots is to use unmanned systems," he said. "Their robust operational reach and the ability to loiter in high threat areas allows them to identify targets and sense the operational environment that need little to no communications," said France.

Rapid prosecution

"With automated and artificial intelligence enhancements they should be able to enable rapid and prioritise decision making. They must be able to identify friendly, neutral, hostile actors and pass information in real time for rapid prosecution," added France.

These benefits can of course be multiplied when employed in large numbers, and the lower costs of unmanned systems in theory, compared to advanced manned platforms should allow industry to produce to the scale and tempo, necessary to meet the threats.

Increased production rates should allow the development of a mesh of network systems sending multiple unmanned systems equipped with varying sensors to cover large areas and pass data to increase situational awareness for other assets.

With a wingspan of 6.5m and length of 10.5m, Jeniah is being developed as a high-speed, low-observable system capable of delivering various munition payloads. Designed to meet diverse mission requirements, for both land and sea operations, Jeniah will have a cruising speed of up to Mach 0.8, with a maximum speed of more than 1,000km/h, delivering payloads in an internal weapons bay, of up to 480kgs.

The UAEAF&AD is undoubtedly one of the most visionary and well-funded air forces in the world, and unmanned-manned ops will be part of its future operational doctrine. Edge CEO Hamed Al Marar told Show Business: "Jeniah is definitely being developed for manned-unmanned operations because that is where the technology is taking us." ▲

Get set for third edition of World Defense Show

World Defense Show is appearing at IDEX 2025 as part of the Saudi Arabian pavilion, providing visitors with an update on the new features and rapid sales for the third edition of the event, due to take place in Riyadh from February 8-12 next year.

WDS 2026 will showcase defence integration through technological development, once more featuring defence primes, contractors, innovators and start-ups from around the globe. Building on the record success of the second event in February last year, the team aims to create a show that offers more to both exhibitors and visitors.

Andrew Pearcey, CEO, said: "The theme for WDS2026 is the 'future of defence integration', which will emphasise the vital importance of collaboration across all defence domains, and will showcase the technology that is enabling ever more sophisticated levels of multi-domain integration."

The industry recognises that a holistic and multi-domain approach to national defence is crucial, and WDS2026 will highlight the developments that empower wider integration, introducing five new features focusing on these cutting-edge technologies, including the unmanned systems zone, naval innovation zone, and how AI is shaping the future of defence.

Also new for 2026 is the Saudi supply chain zone, which focuses on the growing capabilities and partnership prospects of high-calibre local manufacturers, and highlights the continuing national support for the Kingdom's goal to localise 50 per cent of defence spending by 2030.

As a unique introduction to the potential of the Saudi market, industry interest across the globe has been high. Pearcey said: "The demand has been phenomenal. We have already sold 65 per cent of the floorspace for the third edition.

"Many of the industry's leading multi-defence businesses booked their stands for 2026 during the 2024 event. We have grown each year, in the size of our event, in the number exhibitors and visitors, but also in the depth and breadth of expertise and influence of those taking part in our panels, presentations and discussions."

Many of the show's established and successful features will return, including the delegations programme, WDS connect, cultural programme, future talent programme, live displays, content theatres and meet the KSA government. ▲

Demand has been phenomenal. We have already sold 65 per cent of the floorspace for the third edition— Pearcey ▲

Daily news updates on timesaerospace.aero

How Thales ForceShield keeps a close eye against attack from the air

Protecting citizens from drone and ballistic missiles is becoming an increasing need in the Middle East, as we saw in April 2024 and October 2024 when Iran fired more than 300 drones and missiles at Israel.

Having an efficient and capable air defence is a priority, and it isn't just against drones and missiles, but supersonic missiles, attack aircraft, attack helicopters and cutting edge fourth/fifth generation fighters.

Herve Dammann, Thales executive vice president land and air systems, believes he has the solution, which it demonstrated outside of France for the first time at the World Defense Show in Saudi Arabia last February.

"The threats we face today are much more complex than they used to be – fast, slow, small and big ones – and you cannot defeat them by using just one system. You need an integrated air missile defence system with different kinds of sensors and effectors to cover all threats," he said.

In the past, $500,000 Patriot missiles have been fired at relatively cheap $10,000 drones in the region, which is financially unsustainable. Now governments and their militaries are looking for more cost-effective solutions.

Dammann continued: "Our IADS is an open architecture system, that interfaces into an open control and command system connected by different kinds of sensors [to detect the threat] and effectors [to kill it]."

In other words, the sensors will select an appropriate missile to shoot the target down. In the future AI could provide the operator with the appropriate solution much quicker.

"We are already using AI for some of our systems to analyse a given situation that increases the capability of the sensor itself and even removing false information to allow a quicker decision," Dammann said.

One solution Thales is offering is the so-called ForceShield system and lightweight multirole missile (LMM) effectors to address the traditional incoming as well as asymmetric threats.

ForceShield is built around the company's ControlView command and control centre, the Rapid-Ranger and lightweight multiple launcher – next generation launchers – and the Ground Master GM200/Ground Master 400 radars that incorporates Starstreak and LMM missiles.

However, as Dammann said: "We can customise our potential customer's needs to both meet the threats and its budget." ▲

Thales' Ground Master 400 is proving crucial for detecting threats at long range and at low altitude in the region

Space: The new arena for defence and security

Space is now an important component of any country's defence strategy, whether from an Earth observation or communications perspective.

This fact hasn't been lost on countries in the MENA region, with the UAE, Saudi Arabia, Qatar, Oman and Iran all actively progressing their space programmes.

Since 2019, the UAE has invested more than $800 million in building a space defence industry, aiming for a leading role in satellite technology by 2030 as part of its National Space Strategy.

In September, United Arab Emirates defence conglomerate, Edge Group, announced it was launching a new company focused on advanced satellite technologies for security and global competitiveness.

The company, named FADA, meaning "space" in Arabic, will serve both domestic and international markets, producing and integrating satellite systems and subsystems.

In its announcement, Edge said: "We are fully committed to advancing the UAE's strategic interests in defence and advanced technology. FADA's mission is to develop sovereign space capabilities and homegrown technologies in the UAE."

This includes synthetic aperture radar (SAR), electro-optical (EO) and infrared (IR) payloads, as well as satellite platforms, and satellite cybersecurity and protection services. FADA will also develop cybersecurity and protection technologies, both crucial for enhancing its ability to address increasing cyber threats in the region.

Hamad Al Marar, managing director and CEO, Edge Group, said: "The launch of FADA will enable Edge to grow and fortify its position in the global space industry in line with the UAE's vision of becoming a leader in space technologies, creating the blueprint for a self-sufficient and innovative ecosystem."

The announcement follows Edge's selection in November 2023 as the prime contractor in a strategic partnership agreement with the UAE Space Agency to implement the 'Sirb' (Arabic for flock) programme, a constellation of three fully IP-owned synthetic aperture radar (SAR) satellites, marking one of EDGE's first ventures in the space domain.

Sirb aims to launch the first satellite, Sirb-1, by 2026 and is the first national space capability-building programme to be implemented by a local industrial consortium led by key players in the UAE's private space sector and national centres.

In December at Abu Dhabi's "ERTH" space debate, FADA said its presence highlighted how the UAE is nurturing future talent in space sciences and engineering, leveraging cutting-edge technologies such as AI, quantum computing, and autonomous systems to build a resilient, sustainable space ecosystem.

Space-link necessities

UAE is also not the only Gulf country that is looking towards space. The Kingdom of Saudi Arabia is expected to merge its air force and space force into a single entity. Regional conflicts, especially the problems in Gaza, have shown the necessity for space-linked applications, from navigation (which is subject to jamming in the Middle East) to satellite control of unmanned air systems, now heavily deployed in the region.

The SaudiSat-5A and -5B satellites were launched from China in 2018 and are Earth observation and technology demonstration satellites developed by King Abdulaziz City for Science and Technology. Both satellites are suspected of having military purposes. The aim of the satellites is to provide high-resolution images of the planet's surface from low Earth orbits which will be used for urban planning and monitoring changes on the Earth's surface. The high-resolution images will also no doubt be used by government agencies.

In March 2024, the Saudi Ministry of Defense (MoD) was said to be embarking on a new era of space defence initiatives, with a specific focus on integrating artificial intelligence (AI). Discussions with major international players in this arena are said to be under way.

Saudi Arabia's Neo Space Group (NSG) was set up in May 2024 to offer a broad portfolio of services and be an investor in a variety of space technologies. It has stated its intention to lease multi-orbit capacity to compete in the satellite market and to own its own constellation in the future.

According to a recent Space News report, CST published research last year that predicted Saudi Arabia's space industry would grow to $2.2 billion by 2030, compared with $400 million in 2022.

Qatar's space defence programme aims to acquire a military communications satellite and sign agreements with the United States to enhance space surveillance. In October 2023, the Qatar Armed Forces signed a space situational awareness data-sharing agreement with U.S. Space Command (USSPACECOM) to provide improved surveillance of the cluttered space above Earth.

The agreement authorised the exchange of information and enhances the safety, stability, security and sustainability of space for everyone.

Vying to secure a deal

In August the Qatari Ministry of Defense (MoD) was said to be in talks with the French Ministry of Armed Forces and the U.S. Department of Defense regarding military communications satellites. An Airbus-Thales Alenia-led consortium is reportedly still working to finalise an agreement with Qatar. It is thought that U.S. companies, backed by the Pentagon, are also vying to secure a deal.

Qatar recently signed a joint cooperation project with the National Aeronautics and Space Administration (NASA) to design and launch a satellite to study the effects of climate change, water resources, and the impact of rising sea levels on the desert in the Arabian peninsula.

In November 20024, Oman launched its first satellite to capture data and detailed images for urban planning, forestry monitoring, and disaster management. Owned by Omani space start-up Oman Lens, the OL-1 satellite, equipped with artificial intelligence technologies, was launched into space by CAS Space from the Gobi Desert.

OL-1 is the country's first locally-developed optical satellite, specialising in remote sensing and Earth observation capabilities, the Oman News Agency reported.

Oman Lens plans to launch a constellation of satellites over the next five years, develop new technologies for smart cities, and enhance data analysis in cooperation with its partners.

Meanwhile, Oman continues to develop the Etlaq spaceport, in the port town of Duqm, which aims to support scientific and commercial launches, with operations expected to begin fully by 2030. In December it had its first launch, which saw a 6.5-metre tall rocket, named Duqm-1, rise to an altitude of 140km above sea level, crossing the Karman line, recognised as the boundary of space, at speeds of up to 1,530 m/s.

The Egyptian Space Agency, has announced that the African Development Satellite, a collaborative project between Egypt, Ghana, Kenya, Nigeria, Sudan and Uganda, is on track to be launched at the end of the year.

The African Development Satellite will focus on climate change studies. Participating African countries—Egypt, Ghana, Kenya, Nigeria, Sudan and Uganda—are jointly designing the satellite's subsystems, with Egypt taking the lead on design, assembly, integration, testing, and launch.

And finally, Iran announced in September that it had successfully launched an imaging satellite into space. The Noor-3 satellite had been put in an orbit 450 kilometres above the Earth's surface, the state-run IRNA news agency reported.

The final frontier...

Authorities released footage of a rocket taking off from a mobile launcher without saying where the launch occurred.

The importance of the sector has not been lost on the organisers of this year's IDEX event as yesterday's International Defence Conference (IDC) at the Emirates Palace addressed the growing importance of space in defence and modern warfare.

The session focused on the increasing attention given to the threats and opportunities in this crowded, competitive, and contested domain, as the world experiences rapid changes in the strategic space environment, marked by a significant rise in satellite launches and the use of commercial satellites in actual combat operations.

Participants outlined the importance of developing new technologies for space situational awareness (SSA), missile defence, secure satellite communications, and enhancing resilient space assets.

In contrast, counter-space capabilities, designed to disrupt and penetrate the use of space services, pose significant threats to military operations. The session also delved into the importance of nations establishing space forces, leadership, strategies, policies, and alliances. ▲

R-GPS programme to attack GPS spoofing/jamming

The U.S. Space Force is aiming to eradicate GPS jamming, spoofing and more permanent disruptions with its resilient global positioning system (R-GPS) programme.

R-GPS will provide resilience to military and civil GPS user communities by augmenting the GPS constellation with small satellites transmitting a core set of GPS signals.

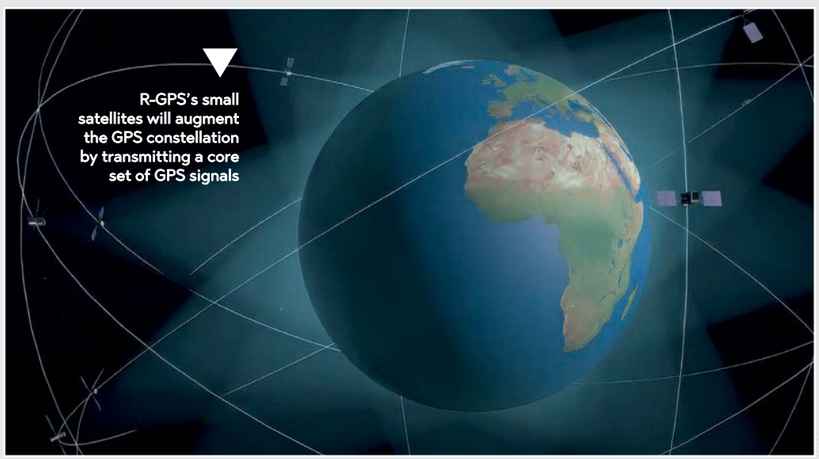
L3Harris Technologies has received a contract from the U.S. Space Force's Space Systems Command to design concepts for phase 0 of R-GPS.

The R-GPS programme is a procurement of cost-effective small satellites that will augment the existing 31-satellite GPS constellation providing resilience to military and civil GPS users.

This R-GPS award is the first of three phases to produce up to eight R-GPS satellites available for launch as soon as 2028.

Ed Zoiss, president, space and airborne systems, L3Harris, said: "We are answering the call to protect and defend national security interests by developing and deploying reliable and robust GPS technologies crucial to the warfighter and the global populace.

"We will leverage our five decades of experience as a key mission partner providing GPS to deliver a more resilient positioning, navigation and timing (PNT) infrastructure."



SHARED GOALS

Jean-Brice Dumont, head of air power at Airbus Defence and Space explains the company's strategy in the UAE, the role of the C295, potential of the A400M and how the region plays a growing role in the global Airbus supply chain

Can you outline the new Airbus strategy with the UAE? Our strategy reflects our long-term commitment to strengthening partnerships, fostering industrial capabilities, and supporting the nation's vision to become a global hub for future industries.

We are dedicated to enhancing the UAE's aerospace and defence sectors, aligned with the nation's ambitious Operation 300bn strategy to boost industrial output and economic development, and we continue to make progress on this journey.

Airbus has been a significant contributor to the UAE aerospace industry for years, and we aim to expand beyond traditional supply chains to include local production and exports. For example, our agreement with EPI to manufacture cargo compartment removable tanks (CCRT) for the C295 represents this evolution.

Such partnerships advance specialised manufacturing capabilities in areas like complex aerostructures for military platforms, create new revenue streams for UAE companies, and generate highly-skilled jobs. This ensures the UAE's growing integration into the global aerospace supply chain while fostering mutual growth for both Airbus and our local partners. By working closely with key UAE players such as EDGE, EPI, Strata, and Tawazun, we align with the UAE's goals to bolster local manufacturing capabilities and strengthen regional defence self-reliance.

Can you expand on the partnerships with the key UAE aerospace players? In the UAE, we collaborate with Strata Manufacturing, fully-owned by Mubadala, and EPI, a key EDGE entity, either directly or through tier one suppliers, and these partnerships embody a shared ambition to advance aerospace and defence capabilities. Over the past 15 years, Strata has become an essential contributor to our global supply chain, delivering critical components for all our widebody aircraft.

Similarly, EPI plays a pivotal role, manufacturing critical airframe parts for the A320 and A330 platforms. Our recent partnership with EPI for C295 CCRTs marks a significant milestone, transitioning EPI into defence manufacturing and sub-assemblies, and aligns with Tawazun's objectives and the UAE's broader industrial strategy.

Looking ahead, we are proposing to manufacture significant work packages for the A400M in the UAE, should the aircraft be selected. EPI and Strata would be central to this ambitious programme, with plans to build an ecosystem around the A400M, including MRO and training centres, and these initiatives aim to further enhance regional aerospace capabilities.

How important is the UAE's C295 project to Airbus? In the defence sector, our military aircraft play a growing role across the region. The UAE operates a fleet of seven C295s, which have established themselves as the undisputed market leader in the medium tactical transport category.The recent addition of the cargo compartment removable tank (CCRT) enhances the C295's capabilities, enabling new missions such as aerial refuelling.

Please give us an update on the A330 MRTT in the region? The A330 multi-role tanker transport (MRTT) is at the forefront of modern air-to-air refuelling technology. The UAE currently operates four A330 MRTTs, with the latest delivered at the end of last year, and a fifth on order. Globally recognised for its advanced air-to-air refuelling capabilities and its ability to meet a wide range of operational requirements, the A330 has become an integral part of the UAE's fleet due to its proven reliability and versatility.

"We are dedicated to enhancing the UAE's aerospace and defence sectors, aligned with the nation's ambitious Operation 300bn strategy to boost industrial output and economic development, and we continue to make progress on this journey"

Airbus or its previous identities has been working in the UAE since the 1970s, can you tell us how the story started and where you are today? Airbus' journey in the UAE began in the 1970s, driven by a shared vision of fostering aerospace innovation and industrial growth. Over the decades, our presence has expanded across commercial aviation, defence, and space sectors.

Today, the UAE is a strategic partner and a regional hub for Airbus, with parts made in the UAE featuring in every Airbus aircraft, thanks to collaborations with entities such as EDGE, Strata, EPI, and Mubadala. Additionally, the UAE's military fleets of A330 MRTTs and C295s reflect the trust placed in Airbus to deliver critical capabilities. ▲

JEAN-BRICE DUMONT
Head of air power at Airbus Defence and Space

Airbus

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