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Defence Industry

Sagem wins order from Nexter Systems to supply 37 SIGMA 30 pointing systems for CAESAR gun export contract

Sagem (Safran) has won a new order from Nexter Systems to supply 37 SIGMA 30 navigation and pointing systems for CAESAR guns, to be delivered to an Asian customer.

Sagem's SIGMA 30 system gives long-range artillery system immediate, high-precision firing capability, since they do not need GPS.

Drawing on Sagem's proven expertise in navigation systems and inertial sensors, the SIGMA 30 features large digital ring laser gyro technology. Its performance characteristics make it a perfect solution for today's artillery. Enabling deployment in distributed configurations, the Sigma 30 system enhances the mobility and protection of support forces. It is mounted on the cannon, and offers totally independent operation, protected from enemy countermeasures.

The SIGMA 30 system contributes to the excellent operational results of CAESAR guns deployed by the French army in today's most demanding theaters, including Afghanistan and, most recently, Mali, for Operation Serval.

The contract announced today consolidates Sagem's partnership with Nexter Systems for the CAESAR gun, by bringing the advantages of latest-generation inertial systems to the company's entire range of combat vehicles, whether in production or under development. All CAESAR artillery systems now in service, more than 250 units, are equipped with the SIGMA 30 navigation and pointing system. They are produced at Sagem's Montluзon plant.

In addition to CAESAR guns, Sagem's SIGMA 30 system outfits 40 other artillery systems, including: PzH2000 (Krauss Maffei Wegmann), MLRS M270 (Airbus Defense), Nora (SDPR), Archer (BAE), and the 2R2M mobile mortar (Thales).

Sagem has developed proven expertise in all inertial technologies (mechanical, laser, fiber-optic, vibrating), with more than 60 years of experience on both civil and military navigation systems operating in all environments around the world.

Defence Industry

KMDB has manufactured a version of the BTR-4 fitted with additional protection

Kharkiv, Ukraine -- The State Enterprise "Kharkiv Morozov Machine Building Design Bureau" (KMDB), which is included in the State Concern "Ukroboronprom", has completed production of a version of the BTR-4 armoured fighting vehicle fitted with additional protection.

The new version of the BTR-4 armoured fighting vehicle enlarges the family of 8x8 armoured vehicles that has already entered series production. KMDB has developed and manufactured a prototype and an add-on armour kit for it. The add-on armour makes it possible to considerably increase the level of protection of the crew and vehicle-borne troops, who are seated inside the BTR-4. This armour can be installed and dismounted by the manpower of the crew under field conditions depending on the planned combat task and the supposed threat.

About the BTR-4 armoured fighting vehicle:

The BTR-4 is an 8x8 amphibious armoured fighting vehicle. The vehicle features a modular design, which enables its basic chassis to be used for development of a family of armoured vehicles. This family comprises an armoured personnel carrier, infantry combat vehicle, command vehicle, command staff vehicle, armoured ambulance, and armoured repair and recovery vehicle. Being able to accommodate various overhead weapon stations and special equipment, the vehicle can be adapted for fulfilment of various combat and auxiliary tasks.

The BTR-4 is in service with the Ukrainian Army. The vehicle is also of great interest for foreign customers.

Contracts

Elbit Systems to Upgrade Tanks for a Customer in the Asia-Pacific Region Under $290 Million Contract

Haifa, Israel -- Elbit Systems Ltd. ("Elbit Systems") announced today, that it was awarded a contract by a customer in the Asia-Pacific region to perform a tank upgrade program. The contract, valued at approximately $290 million, will be performed over a three-year period.

The upgrade program will provide the tanks with night operation capabilities by the supply of a variety of advanced systems, such as gunner sights and fire control systems.

Elbit Systems President and CEO, Bezhalel (Butzi) Machlis, said: "We are very pleased to be awarded this significant contract, demonstrating our unique capabilities and experience in upgrading main battle

tanks. Asia-Pacific is one of Elbit Systems' key markets and we are very glad to announce yet another success in this region".

Army

Unmanned Vehicle Demo Showcases Leap-Ahead Technology

Working closely with Lockheed Martin and a conglomeration of Army technology, acquisition and user community stakeholders, the U.S. Army Tank Automotive Research Development and Engineering Center successfully demonstrated an unmanned military convoy Jan. 14 at Fort Hood, Texas.

From a rooftop in the Fort Hood training area, military and industry VIPs saw firsthand how the Autonomous Mobility Appliqцй System, or AMAS, enabled two driverless Palletized Loading System prime movers and an M915 tractor trailer truck to seamlessly interact with a manned Humvee gun truck escort. The convoy negotiated oncoming traffic, followed rules of the road, recognized and avoided pedestrians and various obstacles, and then used intelligence and decision-making abilities to re-route their direction through a maze of test areas to complete both complex urban and rural line haul missions.

As the ground systems expert within the U.S. Army Research, Development and Engineering Command, TARDEC develops, integrates and sustains the right technology solutions to address ever-changing threats and shifts in strategic, technological and fiscal environments. Flexibility and adaptability are vital to future systems, and AMAS is designed to provide a wide range of military vehicle platforms with optionally-manned capabilities that will increase safety and provide the warfighter with additional flexibility.

"We're not looking to replace Soldiers with robots. It's about augmenting and increasing capability," said Col. Chris Cross, chief of Science and Technology at the Army Capabilities Integration Center.

Equipped with GPS, Light Detecting and Ranging systems, known as LIDAR, Automotive radar, a host of sensors and other high-tech hardware and software components, the common appliqцй kit's intelligence and autonomous decision-making abilities can be installed in practically any military vehicle, transforming an ordinary vehicle into an optionally manned version.

AMAS can also keep personnel out of harm's way and provide Soldiers on manned missions with increased situational awareness and other safety benefits. For instance, AMAS also features collision mitigation braking, lane-keeping assist and a roll-over warning system, electronic stability control and adaptive cruise control. During manned missions, these additional safety features could theoretically increase Soldier performance. The robotic mode frees up the vehicle crew to more closely watch for enemy threats, while still leaving them the option of manually taking control of the vehicle when necessary.

"The AMAS hardware and software performed exactly as designed and dealt successfully with all of the real-world obstacles that a real-world convoy would encounter," said AMAS Program Manager David Simon, with Lockheed Martin Missiles and Fire Control.

AMAS development aligns with Army goals for the Future Force. At an Association of the United States Army breakfast in Arlington, Va., Jan. 23, Army Chief of Staff Gen. Raymond Odierno talked about the Army Modernization Strategy and the difficult decisions ahead.

"What is that leap-ahead technology that we need that could make a real difference for our Soldiers on the ground?" Odierno asked. "What is the technology that allows us to decrease the weight so we can be more expeditionary? I need tactical mobility for the future. We need to move towards mobility and try to determine how we sustain survivability while increasing mobility."

In his just-released CSA Strategic Priorities, Odierno added that we must prioritize Soldier-centered modernization and procurement of proven technologies so that Soldiers have the best weapons, equipment and protection to accomplish the mission.

Another AMAS demonstration with more vehicles and more complex notional scenarios is scheduled for later this year.

"We are very happy with the results, but the AMAS must undergo more testing before it becomes deployable," said TARDEC AMAS Lead Engineer Bernard Theisen.

"The vehicles and systems are replaceable, but nothing can replace the life of a Soldier. These systems keep Soldiers safe and make them more efficient," he said.

TARDEC is the ground systems expert within RDECOM. It provides engineering and scientific expertise for Department of Defense manned and autonomy-enabled ground systems and ground support systems; serves as the nation's laboratory for advanced military automotive technology; and provides leadership for the Army's advanced Science and Technology research, demonstration, development and full life cycle engineering efforts.

ABOUT TARDEC

TARDEC is part of the U.S. Army Research, Development and Engineering Command, which has the mission to develop technology and engineering solutions for America's Soldiers.

TARDEC is also a TACOM Life Cycle Management Command partner. In this capacity, it is responsible for critical technology functions within the "acquisition -- logistics -- technology" system life-cycle model, including: technology maturation and integration; technology subject-matter expertise; systems-level

engineering analysis; and systems engineering.

TARDEC provides engineering support for more than 2,800 Army systems and many of the Army's and DoD's top joint development programs. The organization is responsible for maximizing the research, development, transition and sustainment of technologies and integration across ground systems.

RDECOM is a major subordinate command of the U.S. Army Materiel Command. AMC is the Army's premier provider of materiel readiness -- technology, acquisition support, materiel development, logistics power projection, and sustainment -- to the total force, across the spectrum of joint military operations. If a Soldier shoots it, drives it, flies it, wears it, eats it or communicates with it, AMC delivers it.

Exhibitions

Otokar to present COBRA and ARMA at FIDAE 2014

Otokar, the biggest privately owned company of Turkish defence industry, presents its worldwide known armoured tactical vehicles COBRA and ARMA 8x8 at FIDAE 2014 International Air and Space Fair in Chile, between 25th and 30th March.

Chile - Otokar participates in the Chile International Air and Space Fair FIDAE 2014, between 25th and 30th March. At the exhibition, Otokar presents models of its worldwide known armoured vehicles COBRA with KESKIN turret and ARMA with MIZRAK -30 turret in its stand, Hall A, A-20.

Highlighting the success of Otokar in international markets and the aim of opening to new markets General Manager Mr. Serdar Gorguc said: "Otokar is the main land systems supplier of Turkish Armed Forces. We have delivered over 28 thousand military vehicles to nearly 40 different users in around 30 countries."

Otokar tactical armoured vehicles are operating under many different geographical and extreme climate conditions in the world and their combat capabilities are proven in the real combat situations in high risk areas. Today, Otokar military vehicles are globally deployed in various operations under UN and NATO flags.

Otokar provides the modern armies with state-of-the-art tactical vehicles in different configurations through its product spectrum that covers the full range of armoured vehicles from 4 tons up to main battle tanks.

Otokar is also the prime contractor for Turkey's largest land systems programme: Altay Turkish National Main Battle Tank Project. Altay project requires the design, development, production, test and qualification of a platform that will meet the technical and tactical requirements of the Turkish Land Forces Command.

ARMA multi-wheel tactical armoured vehicle family

ARMA 8x8 is a new generation modular multi-wheel armoured vehicle with superior tactical and technical features. Thanks to the modularity and highly protected armoured monocoque hull design, ARMA is a modular platform that forms a basis for 6x6 and 8x8 family of vehicles with a high common logistics. ARMA's basic architecture, allows the integration of various types of mission equipment or weapon systems capable of meeting today's and future needs of the modern armies in the conventional battlefield and peace-keeping operations. ARMA, being an agile and highly manoeuvrable platform, can cross over long distances in a wide range of challenging terrains from deserts to arctic conditions.

ARMA 8x8 carries 12 personnel and has different combat weights of 24,000 kg and 28,000 kg in different configurations. Depending on the customer requirements, ARMA can be equipped with a 450hp or more powerful engines and proven driveline components to perform superior mobility on all terrain conditions. The engine is located at the right front of the vehicle, allowing a comparatively high internal volume to be efficiently and ergonomically used. Water-cooled turbo charged diesel engine capable of running on F-34 or F-54 fuel drives the wheels through an automatic gearbox and transfer box.

The independent suspension system enhanced with Run Flat Tires, built-in Central Tyres Inflation System (CTIS) and Anti-locking Brake System (ABS) improves ground mobility and ride comfort even over the roughest terrain. Vehicle's mobility is further enhanced with longitudinal and transverse differential locks and the high power to weight ratio coupled with high ground clearance and approach/departure angles. Also, ARMA provides amphibious capability by twin hydraulically driven screw-propeller with joystick control.

ARMA provides a high level of protection against ballistic and mine threats by means of high hardness monocoque steel hull. V-shaped monocoque type body structure provides high level of mine blast protection for the crew. Specially designed seats preventing body injuries such as head, neck, spinal cord and pelvis and multi-point seat belt provides safe cruising for the crew.

ARMA family, thanks to its high payload and large internal volume, allows integration of various types of mission equipment and weapon systems. Furthermore, with the outstanding design supporting various types of mission equipment, ARMA can be easily adapted for a wide range of roles and missions such as Personnel Carrier, Infantry Fighting Vehicle, Command and Control Vehicle, Reconnaissance / Surveillance Vehicle, CBRN (Chemical Biological Radiological Nuclear) Reconnaissance Vehicle, Maintenance / Recovery Vehicle and Medical Evacuation Vehicle.

ARMA 8x8 is displayed with the Otokar designed

unmanned turret system, MIZRAK-30. It is controlled by a gunner and a commander seated inside the vehicle under armour. Armour piercing, high explosive and all other types of ammunition available for the cannon can be fired. MIZRAK-30 has the latest generation digital fire control system architecture having dual-axes independently stabilized commander and gunner sights.

COBRA

COBRA draws attention with its multi-purpose modular structure and design that successfully meets the requirements of modern armies around the world. The common platform concept helps to simplify the training of drivers and maintenance personnel and optimizes logistic support and planning. Cobra's multi-mission capability is reflected in a range of variants including weapon carrier, reconnaissance vehicle, personnel carrier, ambulance, NBC Reconnaissance, and many more.

COBRA provides superior mobility, a high level of protection, adaptability to various missions and a low logistic footprint.

The powerful turbo diesel V8 engine and high power/weight ratio give COBRA, power to navigate in the toughest terrain conditions. The independent suspension, the Central Tyre Inflation Systems along with the permanent 4x4 drive, automatic transmission and front/rear 2 speed lockable transfer box ensure the highest level of mobility. The optimised body angles of the monocoque hull structure grants COBRA a reliable constitution for the superior protection resulting an excellent level of built in survivability. Prioritizing the concepts of safety and comfort of the crew, COBRA transports up to 9 personnel from one mission to another. Thanks to the optimised angles of the armoured body in monocoque structure, COBRA differentiates itself with remarkable protection against explosives and mines.

Contracts

Cassidian Optronics receives EUR40M to deliver optronic equipment for army vehicles

Cassidian Optronics GmbH, a subsidiary of Airbus Defence and Space, has received an order valued at more than 40 million euros from Krauss-Maffei Wegmann GmbH & Co. KG and Rheinmetall Defence Electronics GmbH, for the supply of vision equipment.

The optical and optronic equipment will be integrated into Leopard 2 A7+ battle tanks and PzH 2000 self-propelled howitzers operated by customers in the Middle East region.

Till von Westerman, head of the “Ground” activities at Cassidian Optronics GmbH, assessed the significance of the order: “With this order, Cassidian Optronics continues to be the leading supplier of stabilised periscopes and weapon optronics sensors for the entire Leopard family. We view this as recognition of the performance of our products which we continuously improve to increase safety and effectiveness.”

The equipment supplied for the battle tanks includes, amongst other items, the PERI RTWL commander’s periscope (RTWL = abbreviation for all round view, day, heat, laser), the sensors for the EMES 15 gunner’s sight as well as the FERO Z18 auxiliary sighting telescope. For the PzH 2000 self-propelled howitzers, Cassidian Optronics is supplying the gunner’s sight and the commander’s periscope. For indirect targeting, if the gun laying sensors fail, the R19 panoramic periscope with 4x magnification is supplied. All vehicles are equipped with the Spectus driver’s vision device.

The PERI RTWL stabilised commander’s periscope contains a third-generation Attica thermal imaging unit, a daylight camera as well as an eye-safe laser range-finder. If a target has been acquired with the PERI RTWL periscope, the data can be sent to the battle tank’s EMES 15 fire control system. For the EMES 15 system, Cassidian Optronics supplies the Attica thermal imaging unit and parts of the daylight optics as well as the laser range-finder. Working together with the fire control system, these sensors ensure very precise targeting and a high probability of the first shot hitting the target.

With the Spectus multi-spectral driver’s vision device, images from an uncooled, high-resolution thermal imaging unit are seamlessly overlayed with images from a camera supporting twilight use, to create a more multi-layered image whether for daytime, night time or for restricted visibility use.

Employing about 800 staff at the German locations of Oberkochen and Wetzlar, and at Irene in South Africa, Cassidian Optronics GmbH develops and manufactures optical and optronic products which are used in military ground, sea and air systems, in border surveillance and security systems, in non-military high-tech systems and in the aerospace sector. Cassidian Optronics combines the optical and optronic precision technology from Carl Zeiss Optronics with Cassidian’s know-how as a global market leader in defence and security technology.