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Exhibitions

Tiger sneaks into Europe

The Slovak capital, Bratislava, had hosted the 6th International Defence Exhibition Bratislava (IDEB 2016) from 10 to 12 May this year. The show was attended by 122 firms from 20 countries, including major European arms manufacturers.

The Military Industrial Company (VPK LLC) took part in the exhibition in cooperation with its Slovak partner Corvus Slovakia s.r.o. and displayed a full-scale example of the SBM VPK-233136 Tigr armoured car.

The two companies' stand prompted intense interest of exhibitors, experts and the public at the show. The exposition was visited by ranking officers of the Slovak General Staff and Slovak Army, who were truly interested in the Tigr armoured car.

Mention should be made that a full-scale Aligator II armoured vehicle, an analogue of the Tigr, was on display across the aisle from the Tigr. Nonetheless, many experts inquired specifically about the Russian vehicle.

It is unclear, though, why the Russian media covering the arms show in Bratislava have kept mum about the full-scale Russian-made Tigr displayed at IDEB 2016.

Exhibitions

Paramount Group Unveils New Generation 8x8 Infantry Combat Vehicle For Global Defence Market

Astana -- Paramount Group, the African-based global defence and aerospace company, today, unveiled a new generation 8x8 Infantry Combat Vehicle, representing the pinnacle of land system technologies which is designed to meet the world-wide demand for sophisticated, but affordable military equipment that provides unrivalled protection for land forces personnel, in an era of unprecedented asymmetrical threats and conflict.

The highly advanced Infantry Combat Vehicle, Mbombe 8, will make its debut at Kazakhstan Defence Expo (KADEX 2016) starting in Astana on the 2nd June 2016.

The Mbombe 8 is at the vanguard of armoured vehicle technologies and has been developed to meet the increasing demand for multi-role, high mobility and mine hardened platforms, and for the changing demands of the global battlefield. Paramount Innovation and Design (a Paramount Group Business) has been responsible for the development and production of a broad range of advanced armoured and mine protected vehicles that are in operation around the world.

The Founder and Executive Chairman of Paramount Group, Ivor Ichikowitz said: "This is a momentous occasion in the evolution of Paramount's Group's offering and we are very excited to develop this high speed, long-range and low profile 8x8 armoured combat vehicle. In less than a decade Paramount has designed, developed and industrialised an armoured vehicle nearly every two years, from a clean sheet design. Without exception we have built a reputation for pushing the boundaries and creating armoured vehicles that are groundbreaking in their design, protection levels and mobility.

Ben Jansen, CEO of Paramount's armoured vehicle business said: "The development of Mbombe 8 has enabled Paramount Group to provide potential customers with a complete family of 4 x 4, 6 x 6 and 8 x 8 AFVs which share over 80% of common components to reduce through life costs and make for easier training and logistics. This commonality relates to both the driveline aggregates, as well as the fact that all three vehicles utilise a 'conventional' or 'in-line' automotive driveline configuration, positioning the powerpack at the front of the vehicle and along its centre line. This configuration results in far greater efficiency in terms of the transfer of power from the powerpack to the wheels, as the loss of power associated with a second transfer gearbox necessary for 'unconventional' drivelines, such as with side-engined vehicles, is eliminated."

Ichikowitz added: "The Mbombe 8 is world-leading in its class, this is a product that we are very proud of. We pioneered mine-resistant flat floor technology which is central to the design of the new 8x8 platform. Another important feature is the driveline commonality across our family of vehicles, as is the case with the Marauder XT (4x4), Mbombe 6 (6x6) and Mbombe 8. This presents a unique opportunity for the global market, affording a prospective end-user of all three vehicles significant savings in the areas of maintenance and logistical support."

The Mbombe 8 is based on the design of Paramount's Mbombe 6 that employs an innovative new form of construction to give unprecedented levels of protection, while keeping profile to a minimum. The 8x8 also draws on the company's experience of designing the highly effective and battle-tested Marauder and Matador mine-resistant vehicles.

Key features of the Mbombe 8 include:

- Gross weight of 28 tonnes and kerb weight of 19 tonnes
- Payload of 9 tonnes which covers weapon system, ammunition, crew and supplies

- Powered by a 6 cylinder engine turbo charged diesel engine
- Six speed automatic transmission
- Max speed of 110km/h
- Operating range: 800 km
- High levels of ballistic and mine protection: ballistic protection: STANAG 4569 Level 3+ and blast protection: STANAG 4569 Level 4a and 4b
- Wide range of turrets and weapon stations can be integrated e.g. the AU-220M remote turret armed with 57mm cannon and a 7.62 mm machine gun
- The cooling systems and driveline have been tested and proven in winter conditions of -55 Celsius and desert conditions of +55 Celsius
- Large internal volume due to position of powerpack

The first advanced prototype of the Mbombe 8 will soon start extensive mobility trails and production could be undertaken in South Africa or Kazakhstan.

The unveiling of Mbombe 8 follows the recent announcement in May that Paramount has started local production of its 6x6 Infantry Fighting Vehicle (Mbombe 6) in Jordan as part of a defence industrial partnership between Paramount Group and the Jordanian defence industry. The multi-million dollar contract will provide the Jordanian Armed Forces with IFVs which will provide the platform for Jordan's future combat vehicle requirements.

Ichikowitz concluded: "South Africa has been leading the world in armoured vehicle and land mine protected technologies for decades. We have an amazing skills base, we are home to some of the best engineers in the world and they have developed technologies that are used globally and save lives every day."

Robots

IAI Introduces RoBattle - a Combat Maneuvering & Support Ground Robot

Israel Aerospace industries (IAI) introduces the RoBattle - an unmanned, heavy duty, highly maneuverable combat and support robotic system, at Eurosatory 2016 (13-17 June, Paris, France). The system is designed to be integrated with tactical forces in mobile, dismounted operations and support a wide range of missions including intelligence, surveillance and armed reconnaissance; convoy protection, decoy, and ambush and attack.

Based on the IAI's cutting edge technology, RoBattle, the newest member of the family of unmanned ground robotic systems from IAI, is equipped with a modular "robotic kit" comprised of vehicle control, navigation, RT mapping and autonomy, sensors and mission payloads. The system can be operated autonomously in several levels and configured with wheels or tracks, to address the relevant operational needs. Operators can equip RoBattle with different payloads including manipulator arms, Intelligence, Surveillance and Reconnaissance (ISR) sensors and radars, and remotely controlled weapons.

"The RoBattle system is based on IAI's vast experience and heritage in development and manufacturing of unmanned systems including unmanned ground vehicles (UGVs). With the modular 'robotic kit' methodology, designed to meet specific customer requirements, RoBattle is one of the most advanced combat, maneuvering, ground robotics in the market." said Meir Shabtai, IAI's Deputy general manager of ground robotics systems. "The RoBattle will become a significant player in the ground robotics market. It presents advanced technologies and capabilities that can close the operational gaps in the future battlefield challenges. We are looking forward to all opportunities in the market".

The growing family of IAI's ground robotics includes:

- PANDA- A combat engineering robotic platforms for overcoming roadside charges, obstacles and various engineering missions
- SAHAR- IED detection and route clearing, multi sensor, counter robotic platform for IEDs located on the ground, hidden or buried
- RoboCon- a convoy and logistic support robotic platform with autonomous driving including "follow me" capabilities
- GUARDIUM UGV - a cost effective and tailored UGV for security and protection of strategic assets and border patrol

Defence Industry

AT Communication is pleased to announce the launch of the AT SA Situational Awareness Terminal

AT Communication International is pleased to announce the launch of the AT SA Situational Awareness Terminal.

The AT SA Terminal integrates with a radio transceiver for the provision of Situational Awareness Data for use by security forces, military, emergency services and other agencies involved in coordinated activities for operations such as drug trafficking, terrorism, border control, defence and emergency

situations.

The system provides the tools necessary to locate and communicate to users using the AT SA tactical terminal tablet or mobile device. Using satellite location systems and integrated maps, the AT SA provides a wealth of visual information as well as the communication and messaging tools for squad leaders in complex situations to coordinate activities with deployed crew using handheld, chest or backpack mounted mobile devices.

AT SA communication functions include exchange of short messages, file transfers, videos, maps, mission objectives, photographs in a secure and structured way. Deployed units can display a practical visual status on a situation on a map of the area include their own position relative to the rest of a group.

The AT SA offers a range of connectivity options for ground and air radio, cellular and satellite radio systems. Using secure and optimised data streaming protocols the system can be expanded to include deployment of rich visual data that extend much further to the front line crew than has traditionally been possible.

In order to meet the demand for rugged conditions, the AT SA is available in various Terminal configurations in tablet and hand held form factors each with able to comply with MIL-STD and IP 67 environmental ratings. Systems are designed to suite Base, Field Command, Vehicular and Man Portable applications.

AT Communication International is available to provide a comprehensive integrated solution based on your mission requirements. Solutions can include a combination of Data Terminals, Radios, Intercoms, Encryption, Situational Awareness Software and Radio Interconnects to provide a coordinated approach to Communications, Command and Control.

For further information, please visit the product page http://at-communication.com/en/data-terminals/at/situational-awareness-terminal.html .

Exhibitions

Eurosatory 2016 – Nexter, KMW: Two brands under a single banner

Munich/Versailles -- At Eurosatory 2016, the world's largest international land defence and security exhibition, Nexter and KMW will be showcasing their product ranges under the joint KNDS banner on just one stand.

Customers, delegations, visitors, journalists, service providers and equipment manufacturers will be received in a common shared area displaying the name and colours of the holding company incorporated in December 2015:

The formation of KNDS represents the beginning of consolidation in land defence systems in Europe.

This consolidation represents a first-class opportunity from both a political and economic perspective. The strategic alliance between Nexter and KMW will enhance both groups' competitiveness and international positions, as well as their ability to meet the needs of their respective national army.

The new name clearly identifies the alliance between two established brands. By preserving both corporate identities and their logos and by combining their colours, Nexter and KMW are displaying their desire to cooperate by pooling their strengths and capitalising on the good fit they form, while each group retains its own capabilities and products.

This milestone reflects the momentum already achieved and opens up a new chapter in Nexter's and KMW's development, as well as in Franco-German defence relations.

"We are glad to present our new step forward on the path to a strong European defence group through our new name and our common presence during Eurosatory" said Stйphane Mayer and Frank Haun, the co-CEOs of KNDS.

Exhibitions

Leonardo-Finmeccanica presents advanced technology for land-based defence

Leonardo-Finmeccanica will attend the Eurosatory exhibition in Paris (June 13 to 17), a benchmark international event for ground-based defence and security technologies.

The focus of Leonardo's presence at the event is the world premiere of the Centauro II 8x8 armoured vehicle. The latest member of a family of Centauro vehicles, it is equipped with a new engine and innovative weapons systems, electronics and communications. Centauro II is produced by a consortium between Iveco Defence Systems and OTO Melara (CIO) and Leonardo is responsible for the turret, including weapons systems, vision systems and fire control systems.

During the show Leonardo will also take part in a ceremony marking the rotation of the presidency of ELDIG (European Land Defence Industry Group), the cross-European land-based sector association companies which is part of ASD (AeroSpace and Defence Industries Association of Europe), representing more than 3,000 companies from over 20 countries. Leonardo is among ELDIG's member firms.

Among the systems on display at Leonardo's stand D501 are the armoured vehicles VBM Explorer and VBM Freccia, the VBM Mortar Carrier, the Lince vehicle equipped with the light HITROLE® 12.7mm turret, the unmanned TRP2 tracked vehicle, the HORUS unmanned air vehicle for surveillance missions and the Dart and Volcano 76 guided ammunitions. There is also a variety of equipment designed to meet the needs of future soldiers: the latest generation EZPRR military

radios, the counter-IED Guardian system, the Linx target acquisition system and the Horizon, Janus and EOST-380 electro-optical systems.

To demonstrate Leonardo's integration and interoperability capabilities, the company will be presenting a complete Command, Control and Communications chain, with workstations simulating SIACCON 2 ADV, C2I ADV, CSD MAJIIC, CID and SICCONA NDC, tactical soldier systems (TCCK and C2SF) and the innovative Software-Defined Radio (SDR) from the Forza NEC programme. The display will even integrate Leonardo's electro-optic sensors and communications from VBM vehicles.

Stand D501 will also feature a model of the multi-functional Kronos Land radar. The tactical variant of the Kronos family of radars, Kronos Land provides immediate and complete coverage of surrounding airspace. The radar can be provided as part of a complete defence system or as a stand-alone sensor in support of air, ground and naval operations.

Notably, the products on show are of great interest to a number of prospective international customers. Various Middle and Far Eastern countries are evaluating the Kronos radar for their air and coastal defences, Leonardo's integrated C4I (Command, Control, Communications, Computers and Intelligence) systems, the company's electro-optical and communications systems and simulation technologies.

In Europe and South America, Leonardo is involved in several acquisition programmes for defence systems, military communications and equipment modernisation programmes aimed at improving the performance of ground forces. In some European countries Leonardo is also involved in ongoing initiatives to provide mission systems for land vehicles. Spain is an important country for Leonardo's land-based defence capabilities and will be represented in the Spanish pavilion by its subsidiary OTO Melara Iberica. OTO Melara do Brasil will also be attending the event and will be present as part of the Brazilian pavillion.

Exhibitions

Thales launches Digipack, a ready-to-deploy solution connecting vehicles on the battlefield

At Eurosatory 2016, Thales announces the commercial launch of Digipack, a turnkey digitisation solution for protected vehicles, designed to provide combat forces with the information superiority they need.

Network-centric operations hinge on the ability to share the right information with the right people at the right time. Digipack meets the requirements of these new forms of engagement to support land forces in their digital transformation.

Information at your fingertips

Digipack is a turnkey solution supplied as a ready-to-deploy digitisation kit including a Battlefileld Management System (BMS), tactical radio and internal communication for crews. Digipack is designed as a cost-effective solution for land forces or special forces and is compatible with all platform types.

With an intuitive design inspired by smartphone apps to offer rapid access to information, Digipack is easy to use by operational personnel without lengthy training and is ideal for on-the-move combat operations.

Digipack draws on Thales's proven expertise and experience in major vehicle digitisation programmes in France and around the world.

Digipack kits are available now for customers seeking to accelerate the digitisation of their armed forces through new-build as well as vehicle retrofit programmes.

Exhibitions

CMI Defence presents the Cockerill® 3000 Series for the first time in Europe

At Eurosatory 2016 and for the first time in Europe, CMI Defence has the pleasure of presenting two variations of its latest up to the minute technological innovation: the modular Cockerill® 3000 Series in the form of the Cockerill® 3030 and Cockerill® 3105.

Based on an unprecedented modular concept, the Cockerill® 3000 Series is a single platform enabling a turret to accommodate guns of different calibres and the corresponding technological modules: automatic 25 mm, 30 mm, 30/40 mm, 35 mm and 50 mm calibre guns, along with direct fire guns of 90 and 105 mm calibre. These systems can also fire missiles.

Thanks to their unique operational capabilities, to the rapid inter-changeability both of their crews and their arms, and to their high degree of common design, these modular turrets of the Cockerill® 3000 Series can cover all types of missions and objectives on the battle field (combat tank, bunker and helicopter engagement, urban combat, intervention in combats known as asymmetric…) at reduced overall operational costs. These systems benefit in particular from the simulation

solutions of CMI Defence supplied under the Agueris brand. These enable training and practice on both virtual immersive cockpits and embedded simulators.

Jean-Luc Maurange, President of CMI Defence: "With the Cockerill® 3000 Series and the innovative modular turret concept, CMI Defence stands apart from the competition. We are confirming our position of leader in the turret domain, by proposing a weapons system at the cutting edge of technology, which combines polyvalence with robustness. The Cockerill® 3000 Series and its high level of performance in the domain of direct firing are, in addition, already meeting with substantial success: a very high number of them are currently in the process of production in our installations in Belgium and France".

Technical characteristics

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Weapon
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Role
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Product name
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::
105mm NATO-standard high-pressure tank gun with optional Gun Launched Anti-Tank Guided Missiles (GLATGM)
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Organic heavy Direct fire-support
::
Cockerill 3105
::
::
90mm medium-pressure gun with optional GLATGM
::
Organic medium direct fire-support and infantry support
::
Cockerill 3090
::
::
Automatic cannon of many types:
::
Infantry support
::
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• 50 mm
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::
Cockerill 3050
::
::
ATGM launched by gun effect
::
Long-range anti-tank
::
System option
::
::
Roof-mounted Remote Weapon System (RWS) (7.62mm MG to 40mm AGL)
::
Close support
::
System option
::

Exhibitions

Centauro II: presenting the world premiere of the new generation armored vehicle

Eurosatory 2016 will give the Iveco–Oto Melara Consortium (CIO) the opportunity to display the latest and most innovative achievements in the field of armoured vehicles.

CIO will present in Paris its newly developed Centauro II, the latest evolution of the Centauro Family. The Centauro having been the first 8x8 wheeled antitank vehicle in the world with a high-pressure gun. The Centauro II represents the logical evolution, being armed with a third generation 120/45 mm gun, with integrated muzzle brake and semi-automatic loading system. The weapon system provides a fire power equivalent to that of most modern main battle tanks, and is capable of firing all latest generation 120 mm, NATO APFSDS and multi-role MP munitions.

To ensure unequalled mobility a new-generation engine, upgraded transmission, braking system and

control electronics have been adopted. While maintaining the H-drive architecture, the Centauro family hallmark, the chassis was rearranged to further improve protection against mines and IEDs, state-of-the-art add-on ballistic packages fitted to the hull ensuring high level protection against kinetic energy and hollow charge projectiles. The same applies to the turret, which also follows the add-on armour kit concept. Ammunition stored in the hull and in the turret are hosted in compartments separated from the crew section by explosion-proof doors, pre-carved panels and dedicated anti-explosion systems ensuring further crew safety. The Centauro II turret is fitted with latest generation optronics for the commander and gunner and with a suite of communications and command and control systems ensuring maximum situational awareness. The turret can be fitted with a Hitrole Light RCWS, that increases flexibility in other-than-war scenarios while ensuring maximum crew protection.

Another vehicle of the Centauro family on display is the Centauro AIFV/OWS 30 Freccia, which combines the proven and highly reliable drive train of the Centauro Family with a hull designed to ensure maximum crew survivability. It has outstanding tactical mobility thanks to its powerful engine driving an automatic gearbox and enhanced by 3-axle steering. The overhead version is fitted with the HITFIST OWS 30mm turret, a remotely operated weapon station developed with the latest technologies in the field of electronics, signature and Man Machine Interface. The main armament consists of the 30mm chain gun, electrically controlled in elevation, traversing and firing operations.

The Centauro VBM Mortar Carrier shares the characteristics of mobility and versatility typical of the Centauro family. Its platform is fitted with a 120 mm rifled mortar that offers many advantages in terms of precision, range, operativeness and ergonomy thanks to its semi-automatic loading system. The system is operated by electro – hydraulic servo system for traverse and elevation of the mortar.

The vehicle with its weapon system on board can be rapidly deployed in complex security conditions thus providing effective support to combat units. The Command, Control and Communication system installed together with a Command and Control System for Artillery allow a deep integration of this platform in the net-centric scenario.

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Future Technologies

Rheinmetall's new IFV, the Lynx

At Eurosatory 2016 Rheinmetall presented its new Lynx infantry fighting vehicle today to the international public for the first time. Agile, hard-hitting and highly protected, this state-of-the-art tracked armoured vehicle is destined to dominate the modern battlefield, lending itself to operations from peace enforcement to high-intensity combat.

Ben Hudson, Head of Rheinmetall's Vehicle Systems Division, said "Lynx is an advanced new modular family of vehicles that offers our customers the highest levels of survivability, mobility, lethality and capacity while utilising proven technologies to deliver a compelling value proposition for our global customers. Lynx delivers the capabilities that will allow our customers to fight, survive and win on the battlefields of today and tomorrow".

Cutting edge capabilities

Four core capabilities characterize the Lynx infantry fighting vehicle: firepower, force protection, situational awareness and mobility.

Firepower: Lynx features a Rheinmetall LANCE turret armed with a stabilized, externally powered, airburst-capable automatic cannon (either 30mm or 35mm). This enables Lynx to effectively engage targets with high precision at ranges of up to 3,000 metres – even on the move. Lynx can also be equipped with an antitank guided missile launcher and a secondary weapon station linked to the main optics (main sensor slaved armament). Not only does Lynx have hunter-killer capability, it can operate in killer-killer mode, since the commander and gunner can observe and engage targets independently of each other.

Force protection: With the diesel engine mounted in the forward section and a modular armour concept, the vehicle architecture offers a high degree of protection. The vehicle's ballistic armour shields Lynx from antitank weapons, medium-calibre ammunition, artillery shrapnel, IEDs and bomblets. In addition, a spall liner in the vehicle interior protects the entire crew. Mine and IED protection packages, decoupled seats and the optional hard kill Active Defence System (ADS) significantly boost the vehicle's survivability.

Situational awareness: The commander and gunner both have access to the Stabilized Electro Optical Sight System/SEOSS, a digital TV - IR optical system with an integrated laser range finder and fire control computer. In the fighting compartment, displays provide the crew with a seamless 360° panoramic view. Rheinmetall's Situational Awareness System (SAS), featuring automatic target detection and tracking, enhances the hunter-killer capability and minimizes crew reaction time. Emerging threats can be swiftly engaged with Lynx's main or secondary armament. Laser warning sensors and the Acoustic Sniper Locating System (ASLS) likewise form part of the sensor suite. A combat management system and intercom for tactical communication round out the array of on-board equipment.

Owing to the manned turret, the commander can still lead from the hatch. The gunner and driver each have

hatches, too, while two soldiers in the rear of the fighting compartment can also observe the area around the vehicle from an open hatch.

Mobility: Lynx features an excellent power-to-weight ratio and can handle gradients of up to 60 degrees and lateral inclines of more than 30 degrees. It can cross ditches up to 2.5 metres wide and ford bodies of water up to 1.50 metres deep. Furthermore, it can climb over one-metre-high obstacles. The vehicle can run on either rubber or light metal tracks.

One vehicle family – one logistics system – one supplier: Rheinmetall

Another characteristic of Lynx is its versatility. For example, the new IFV comes in two versions: the KF31 and KF41 (KF stands for 'Kettenfahrzeug', or tracked vehicle in German). Weighing up to 38 tonnes, Lynx KF31 on display at Eurosatory and can seat 3+6 soldiers. Lynx KF41 is slightly larger and can carry 3+8 soldiers.

Both vehicle classes – Lynx KF31 and Lynx KF41 – can be configured for other roles include a command & control, an armoured reconnaissance, repair & recovery and an ambulance.

A high degree of commonality in parts and components is another prominent feature of the Lynx family of vehicles. This simplifies logistic support and has a positive impact on training. Furthermore, customized service support is available worldwide – ranging from training and logistics to in-theatre repairs and technology transfer.

The Lynx family of vehicles highlights once again Rheinmetall's role as a high-tech enterprise for security and mobility.

Exhibitions

Safran Electronics & Defense unveils new Sigma 30 range of artillery navigation and pointing systems

Safran Electronics & Defense is unveiling at Eurosatory 2016 its new range of Sigma 30 artillery inertial navigation and pointing systems, designed to meet armies' emerging needs.

By offering new versions of its well-known Sigma 30 inertial reference systems, Safran Electronics & Defense has come up with a perfect solution to meet artillery units' broad range of accuracy requirements.

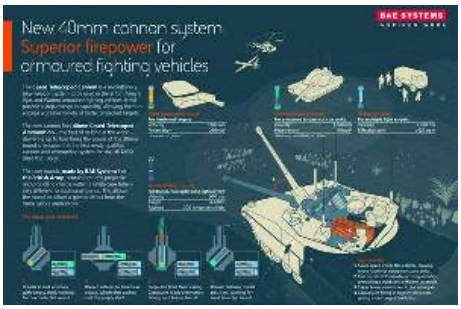
The Sigma 30-200 is an economical version, especially well suited to short- and medium-range artillery pieces, as well as air defense weapons. The Sigma 30-800 is designed for heavy artillery and long- and very-long-range radars.

All Sigma 30 units guarantee outstanding availability even in environments with signal jamming, countermeasures or a GPS signal loss. Designed to be integrated in tactical command and coordination networks, Sigma 30 units may also be coupled with ballistic computers. That gives artillery units a significant operational advantage, allowing fast set-up and distributed deployment whether in asymmetric or symmetric engagement scenarios.

The Sigma 30 family is already in service in more than 40 weapon systems in international markets, including the Caesar, Archer and PzH2000 guns, and NATO's single-rocket launcher, where it has demonstrated its capabilities in foreign operations.

Exhibitions

BAE Systems will be displaying CTAI Cannon at Eurosatory for the first time



This follows the UK Ministry of Defence (MOD) receiving its first cannon and the CTAI factory now ramping up to full production.

The cannon will be used in the MOD's next generation armoured vehicles, AJAX and Warrior Capability Sustainment Programme (CSP), to give the enhanced capability of a 40mm Cased Telescoped Armament System. Even on a single-shift basis, CTAI's factory in Bourges, France, now has the capability to produce 20 cannon systems per month, allowing CTAI to fulfil both its order for the MOD and allow capacity for other customers' requirements.

Craig Fennell, Managing Director of CTAI, explained: "Going from concept to full production of an entirely new cannon system – the first new cannon system for the MOD since the 1960s – takes skill, ingenuity and persistence. BAE Systems and Nexter Systems are proud to have made this world-first achievement which offers a unique product to military customers."

Making components which can withstand firing thousands of high explosive rounds is a challenge most manufacturers don't have to face. Craig explained: "We're building a product that has to perform over and

over again, in the most intense and challenging environments. It has to function in all temperatures and humidity levels, whilst travelling over rough terrain and under enemy fire.

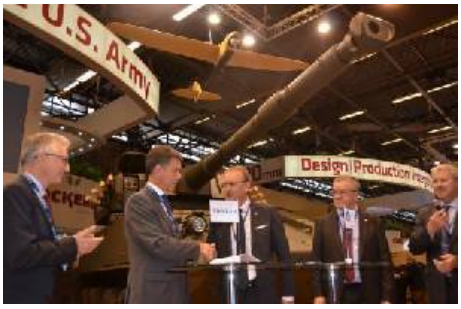
"Additionally, the cannon has to be safe for those operating it. The vehicle crews will be in a confined space, surrounded by explosive rounds, so the cannon system cannot compromise their safety."

Cannon production includes frequent quality checks with a Coordinate Measuring Machine checking all components from the supply chain before assembly. Frequent testing throughout the production process culminates in test firing each cannon at the on-site range in Bourges, before it leaves the factory.

This innovative cannon and ammunition system will transform the capabilities of the vehicles that use it, allowing them to engage a greater variety of better protected targets.

Future Technologies

CMI Defence introduces the world's first UAV integration in a combat turret



CMI Defence is introducing at Eurosatory 2016 a new feature that extends the situational awareness and enhances the indirect firing capabilities of its turrets: the first Unmanned Aerial Vehicle (UAV) integration on a combat turret. This newly developed ability to communicate and interact with a dedicated mission-capable UAV is a world premиre. It is contributing to CMI Defence remaining at the forefront of the technological developments and of the growing needs for versatility on the part of highly mobile armies.

All CMI Defence turrets have advanced features that maximize the offensive and defensive capabilities directly in the control of the commandant of the platoon and of the crew of the combat vehicle. For the first time in the world, CMI Defence has integrated the control of a mini-drone to a weapon system, allowing the direct use of the data coming from its optical payload by the turret crew. This 'world premиre' is demonstrated on CMI Defence booth at Eurosatory 2016, on its flagship Cockerill® 3105HP turret equipped with the advanced 105mm gun.

Derived from the field proven Spy'Ranger drone from Thales and their console Spy'C, the team of CMI Defence has worked closely with Thales to directly run the control software in the Turret Network Controller and the Ballistic Computer of the Cockerill® 3105HP turret. The HMI has been adapted to the existing displays used by the crew to facilitate the control of the drone (position, evolution in the theater of operation) and the use of the data coming from the optical gimbal (display of the aerial view).

The new feature allows:

- Better accuracy in indirect firing via the Forward Observer capability of the drone: target localization and designation, first firing assessment and corrective indication in artillery mode, as well as battle damage assessment.
- Reconnaissance and situation awareness at extended distance, complementing the existing capability of the sighting systems of the turrets.

These new features improve the survivability of light armored vehicles and their weapon systems, improve the crew safety (e.g. in urban areas) and reduce collateral damage by a better assessment of the immediate tactical situation. It is a commander's "direct-in-hand" capability, which complements the traditional Close Air Support and Artillery Support when both are not available.

Jean-Luc Maurange, President of CMI Defence, stated: "At CMI Defence, we constantly develop new solutions to improve the use of Cockerill® systems throughout their life- cycle. This UAV integration is another example of how CMI Defence teams respond to the growing needs for versatility on the part of highly mobile armies."

Spy'Ranger and Spy'C are the properties of Thales.

Defence Industry

CMI Defence, partner of the US Army for the development of the future medium caliber system

At the beginning of 2016 CMI Defence was selected by, and in cooperation with, the U.S. Army Armament Research, Development and Engineering Center (ARDEC) for a Research and Development program focused on Medium Caliber Armament Systems. This effort is being undertaken within the framework of a 'Cooperative Research and Development Agreement' (CRADA) that will be concluded at the end of 2017. It involves the common conception of a new medium calibre armament system incorporating an existing product of the CMI Defence portfolio.

At the end of 2015, CMI Defence was selected by ARDEC to be its partner within the framework of the development of an un-manned medium calibre turret. The project officially began at the beginning of 2016 with CMI Defence's selection. Delivery of the turret to ARDEC is scheduled for mid-2017.

CMI Defence already possesses a remarkable lead in the medium calibre weapons systems domain. The new turret will integrate the 30 mm XM813 gun with a linkless ammunition handling system. It is planned that it will also receive a new precision fire control system with new user interfaces, allowing for a quicker, more accurate, and effective engagements of targets by its Users.

Jean-Luc Maurange, President of CMI Defence: "Being selected by the American army to develop its future medium calibre system is a first rate demonstration of recognition for CMI Defence. Participating in this development is of substantial importance to us. It enables us to be ideally positioned within the framework of the future American modernization program for the Stryker fleet of systems".