

THE OFFICIAL SHOW DAILY
Wednesday, November 8, 2023

Thai Armed Forces to Adapt to Current and Future Challenges



Thai Defence Minister Sutin Klungsang yesterday toured the halls at Defense & Security 2023 expo, meeting exhibitors and participants alike. In this photo, he is at the Czech pavilion being briefed on a trainer jet made by aircraft maker Aero Vodochochy.

He has said in his message that it is essential for the armed forces to continue updating their knowledge base in order to keep abreast of the ever-evolving cutting-edge technologies, as well as adapting their personnel's capability to conform to changes and be ready for immediate action on any given mission.

He reiterated that the event aligns with Thailand's government policy, which is aimed at enhancing the nation's technological capabilities in the realm of security and defence. He said the ultimate goal is to achieve self-sufficiency in the production of defence equipment and encourage the export of domestically manufactured military products. Further, Sutin underscored the exhibition's objective to bolster the defence industry by reducing imports and promoting the transfer of military technology.

Defense & Security 2023 is organised with the full support of the Ministry of Defence, the Kingdom of Thailand and the Royal Thai Armed Forces. ▲

State-of-the-Art Electronic Products and Systems for the Army, Navy and the Air Force



AUBEL-TUAV-100 tethered UAV.

Bharat Electronics Limited (BEL) is a Navratna PSU (government-owned enterprise) under the Ministry of Defence, Government of India. It manufactures state-of-the-art electronic products and systems for the Army, Navy and the Air Force. BEL has

also diversified into various areas like homeland security solutions, smart cities, e-governance solutions, space electronics including satellite integration, energy storage products including e-vehicle charging stations, solar, network & cyber security, railways & metro

solutions, airport solutions, electronic voting machines, telecom products, passive night vision devices, medical electronics, composites and software solutions.

BEL showcases state-of-the-art products and systems spanning every domain of its business.

Its products and systems are clustered as 'Air Defence & Surveillance', 'C4I Systems', 'Artificial Intelligence-based Products', 'Non-Defence & Diversification Products', 'Radar Systems', 'Communication Systems', 'Airborne Products & Systems', 'Homeland Security and Cyber Security', 'Futuristic Technologies', 'Missile Systems', 'EO & Laser-based Products', and 'Outdoor Display Products'. In addition, BEL showcased its R&D capabilities.

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BAE Systems Successfully Tests M109 SPH Modified with 52-caliber Cannon

BAE Systems successfully fired 155mm projectiles from a M109 Self-Propelled Howitzer modified with the Rheinmetall L52 155mm, 52-caliber cannon. The M109-52 is a significant, low-risk, high-performance upgrade to the current 39-caliber cannon and provides the additional range required in large-scale combat operations.

“We’ve demonstrated that the integrated system of the M109-52 is a viable solution for long-range precision fires modernisation needs,” said BAE Systems’ Combat Mission Systems Business Director of Ground Vehicle Production Dan Furber.

“Integrating these two highly capable and proven artillery systems provides stable designs and predictable performance.”

The test, conducted at Camp Ripley in Minnesota, US, proved the compatibility of the L52 cannon with the M109A7 platform during the live fire exercise. BAE Systems



plans to conduct additional testing in 2024, which will highlight extended range across a variety of projectiles.

BAE Systems’ ability to integrate the proven M109 with proven cannon platforms

like the L52 will quickly deliver expanded interoperability on day one with battlefield partners. The L52 artillery cannon is used by nine NATO and allied partner nations’ tactical artillery forces. ▲

DSS Gunning for Wider Share of Global Market



In a business park just outside of Prague, Czech Republic, is a factory producing light machine guns (LMG) with Czech raw materials at a rate of approximately 150 units per month. Defense and Security Services (DSS) was conceived in 2014 and has developed two LMGs chambered in 5.56mm and 7.62mm for their primary sales portfolio.

The short-stroke gas piston PZD 556 Mk 2 and PZD 762 Mk1 LMGs feature telescopic buttstocks with rates of fire ranging from 700 to 1,000 per minute with a maximum range of 1,200 and 3,500 metres respectively for the 5.56 and 7.62 variants. In addition, the weapons have rail integration systems (RIS) to mount accessories such as lasers as well as several barrel lengths that can

accommodate suppressors too. Its quick-change fluted barrels allow the weapon to operate longer without the barrels overheating and features a self-tightening flash hider which guarantees its locked position even during high temperatures. On top of that, its gas regulators with 11 positions affords users the ability to adjust rates of fire, usage of suppressors and ensures smooth usage even when the weapon is dirty or under extreme operational conditions.

As of late, the fully-automatic weapons have seen use on the battlefields of Ukraine, with over 1,000 pieces of both machine guns already on the ground in the hands of Ukrainian troops. According to the firm, 500 more units will be delivered to

Ukrainian forces by end of 2023.

Aside from Ukraine, DSS elaborated on the Ghana Army procuring several units for evaluation earlier in the year and have already committed to purchase an unspecified number of the machine guns. Other than selling firearms, DSS also provides optional training services for the optimal usage of the firearms to deliver maximum proficiency. Since the start of Ukrainian conflict, DSS has trained over 250 Ukrainian personnel on the LMGs.

Furthermore, the company stated that several European specialised military units would be conducting trials of the two machine guns over the next three quarters of 2024, namely the 601st Special Forces Group of the Czech Armed Forces and the Austrian Armed Forces’ Jagkommando, both units acquiring six units respectively to test.

In the Research and Development department, DSS is currently working on developing a 40mm grenade launcher in addition to setting up their very own ammunition production line. DSS is also the exclusive distributor of another Czech arms firm—Pavel Vosátka, which manufactures rifles based on the AR platform. DSS currently manufactures and exports ordnance for tanks, mortars and small arms such as the 125mm tank round and 120mm mortar shells, to countries such as Ukraine. With the LMGs being battle tested, the company is poised to market the weapons to the global market as international defence spending increases. ▲



To coincide with the forthcoming Singapore Airshow 2024 in Singapore, **ADJ** will publish the **Singapore Airshow 2024 Show FOCUS**. The **Show FOCUS** will contain the following:

A profile of the Singapore Airshow 2024 series of exhibitions and its growth over the years. An interview with the Republic of Singapore Air Force (RSAF) chief and a special news report on the RSAF.

A show preview containing special exhibit highlights of the forthcoming Singapore Airshow 2024, with special emphasis on the equipment and services to be exhibited at the exhibition. Also to be included are profiles of prominent exhibitors showcasing their products and services at Singapore Airshow 2024.

3,000 copies of **Singapore Airshow 2024 Show FOCUS** will be distributed throughout the duration of the exhibition at the show site and will be made available to all official delegations, trade visitors and exhibitors.

The **Singapore Airshow 2024 Show FOCUS** is also available online at: www.adj.com.my

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continued from page 1...State-of-the-art...

BEL makes radar systems' comprising Combined Interrogator and Transponder System, Battle Field Short Range Active Electronically Scanned Array (BFSR-AESA) Radar, Frequency-modulated Continuous-wave based Drone Detection Radar, Air Defence Fire Control Radar, Close-in Weapon System, Mountain Fire Control Radar, Weapon Locating Radar, BFSR-XR, X-Band Multi-Function Radar, Battery Surveillance Radar, AESA Radar, and models of 3D Low Level Light Weight Surveillance Radar and 4D Phased Array Medium Power Radar.

BEL's area of Communication Systems include Tactical Data Link, 0.76M Ku-Band Manpack Terminal (manual assisted), Instant Fire Detection and Suppression System, Rugged Switches, Rugged Routers, Mine Field Recording System, Network Hardware Security Modules, Data Link Receiver Unit, High Capacity Radio Relay, Manpack High Frequency Software Defined Radio (SDR), Point-to-Multi-Point Radio, DSSS Networking Radio, SDR Airborne version, SDR Hand Held Naval version, SDR Manpack Naval version, SDR Naval Combat, SDR Tactical, Encryptor, Multi Capacity Encryption Unit, Data Multiplex-er-cum-Encryption Unit, Configurable Live Mk-II, BEL Tactical Computer Mk-VI, Hardware Security Module, Rugged Tablet, Network Time Server and Data Diode.

The company's Airborne Products & Systems include Ultra Violet Missile Approach Warning System, Self-Protection Suite for Helicopters, Hand Held Field Signal Generator, HD Airborne Spread Spectrum Modem, HD Ground Spread Spectrum Modem, Directed Infrared Counter Measure System, Tarang II Radar Warning Receiver



Akash Prime Weapon System.

and Display Unit Indigenous.

Other futuristic technologies include Automatic Dependent Surveillance-Broadcast System, Position Indicator – G3I, Hand-Held Indian Regional Navigation Satellite System, Extended C-Band Block Up-Converter, Monolithic Microwave Integrated Circuit, C Band Phase Locked Oscillator, Router with Call Manager, Voice Gateway Unit, MIL-GRADE TAB, Signal Processing Unit for Flight Level Radar, UHF RFID Reader, 3 ATI Display, Torpbuster CPU Board and Smart Energy Meter.

The company's Homeland Security and Cyber Security cluster include Smart City solutions, Homeland Security solutions, Comprehensive Integrated Border Management System, Naval Airfield Integrated Security System, and Integrated Perimeter Surveillance System, while its Missile Systems' include the Air Defence

Weapon System.

EO & Laser-based Products include Panoramic Night Vision Goggle, Twin Tube Goggle, Laser Dazzler, Corner Shot Weapon System, Multipurpose Reflex Weapon Sight, Mini Eye- safe LRF Module, FO Gyro-based Sensor Packaged Unit, Laser Fence System, Electronic Artillery Fuzes and Aerial Fuze.

BEL also makes Tethered UAV, Shallow Water ROV, Hexacopter and Ultra-Light Weight Enclosure with platform. ▲





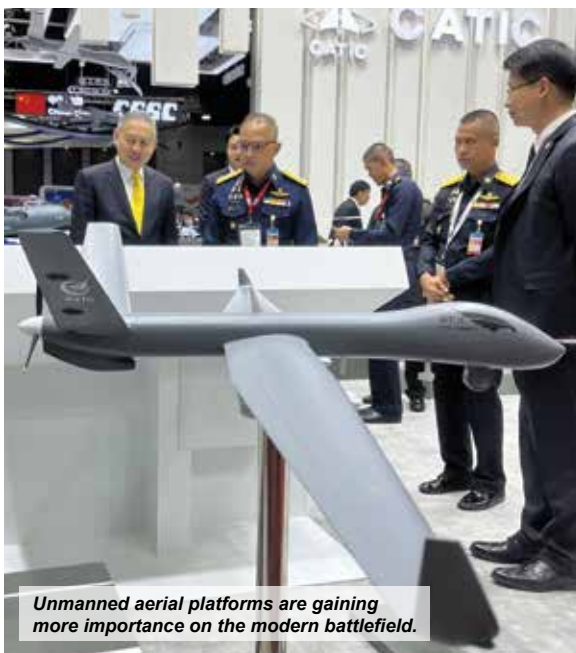
Pictorial Highlights



TRAKON 30x113 mm UKSS (with VENOM LR autocannon) makes its Asian debut in Bangkok.



Infantry systems are omnipresent throughout the show.



Unmanned aerial platforms are gaining more importance on the modern battlefield.



3D S-Band medium-range air-defence surveillance radar from Vietnam's Viettel.



Poly Defence is part of the China pavilion at Defense & Security 2023.



Have box will travel! Tough boxes for military and civilian uses by Supro Box.



Ikramatic Systems simulation solutions



days of the company's inception: "I originally started as a programmer, driven by my passion for developing flight simulators. Thanks to the invaluable insights of friends who served as pilots in the air force, we recognised the potential of our know-how to fulfill the Malaysian air force's pressing need for a flight simulator.

Syed Mohamad, 66, then embarked on an intensive six-month journey to create a prototype, eventually presenting it to

Ikramatic's unique niche expertise in the country at that time.

Ikramatic Systems is now set to embark on a groundbreaking partnership with KAI (Korea Aerospace Industries) to co-develop a Virtual Computer-Based Trainer (VCBT) utilising virtual reality (VR) technology. This innovative project aims to provide an immersive and realistic training experience for the air force.

Jamil expressed his anticipation for this new venture, saying: "I think in the future VR is the way to go because it is really more realistic compared to the conventional way of using the projector."

"We feel like Korea could open up other opportunities for us in the future because they have the platform of multiple successful simulated deliveries. We think we can learn from them and maybe increase our knowledge with simulators, as their first global supplier," Syed Mohamad added.

He said Ikramatic Systems other offerings include training solutions such as Integrated Shooting and Marksmanship Trainer (ISMAT), which provides marksmanship training, judgmental training and collective training for armed personnel; a variety of drone jammers and detectors for total protection against intruding drones; and Simulated Battlefield (SIMBAT) system, an immersive VR tactical training platform designed to simulate realistic combat scenarios without the need for live ammunition or extensive logistical planning. ▲

After more than two decades of success in flight simulation, Ikramatic Systems has diversified into more challenging fields such as Virtual Reality, Real-time Security & Controls, and Electronics Countermeasures, solidifying its reputation as a leading Malaysian innovator in the tech industry.

Founded in 1998 by Managing Director Syed Mohamad Jamil Syed Ahmad, the company has a strong track record of innovation and collaboration with the Malaysian government, particularly in the field of flight simulation,

Ikramatic Systems—the only Malaysian original equipment manufacturer for simulators—began its journey with a goal to develop a full-scale Pilatus PC-7 Flight Simulator for the Royal Malaysian Air Force (RMAF).

Syed Mohamad Jamil recalls the early

the RMAF, which proved highly supportive, resulting in a collaboration that paved the way for more substantial projects to develop flight simulators for the air force.

"Our journey began with the formation of Ikramatic 25 years ago. It took us nearly two years to secure our first major project," Syed Mohamad told ADJ at the ongoing Defence & Security 2023 exhibition in Bangkok. "We consider our work with the RMAF, particularly with the PC-7, PC-7 Mark II, MB-339 and police helicopter projects as significant milestones."

One of Ikramatic Systems' most significant achievements came in 2008 when the Malaysian government awarded them a project to develop a full flight simulator for the Aermacchi MB-339 aircraft. This accomplishment was especially noteworthy due to

Nexter's Solutions for Future Warfare

Nexter, a KNDS company, boasts various range of solutions to prepare for future conflicts. The range of systems includes its combat-proven solutions for the various needs of any modern army such as the CAESAR 8x8, its entire range of ammunition and the NERVA robots.

- The 8x8 is the heavy version of its long-range-proven artillery system. Thanks to an improved STAN-AG level 2 armour, an excellent all-terrain capacity allowed by its eight wheels and 36 rounds is ready to fire and is perfectly adapted to a Central European battlefield.

- KNDS' ammunition offer ranges from medium calibre to artillery rounds. This includes its most recent ammunition, such as the SHARD 120mm improved APFSDS and the KATANA 155mm high-precision round.

- The NERVA small robots are made to address a wide range of mission such as observation, demining, decoy or NRBC detection. With these systems, KNDS has a 10 years know-how in the field of robotics and prepares the heavy robots for the next decades of warfare.



Heavy guns from Nexter, a KNDS company.

Multiple Applications of the Anglo-French 40CTA system

Nexter recently presented its weapon systems that integrate the 40CTA Anglo-French weapon system.

The 40CTA is a modern gun for numerous systems. It is an Anglo-French system made by the joint venture between Nexter and BAE Systems.

CTA International (CTAI), dedicated to the production of the gun and its ammunition, is the only company that masters the cased telescoped technology which allows

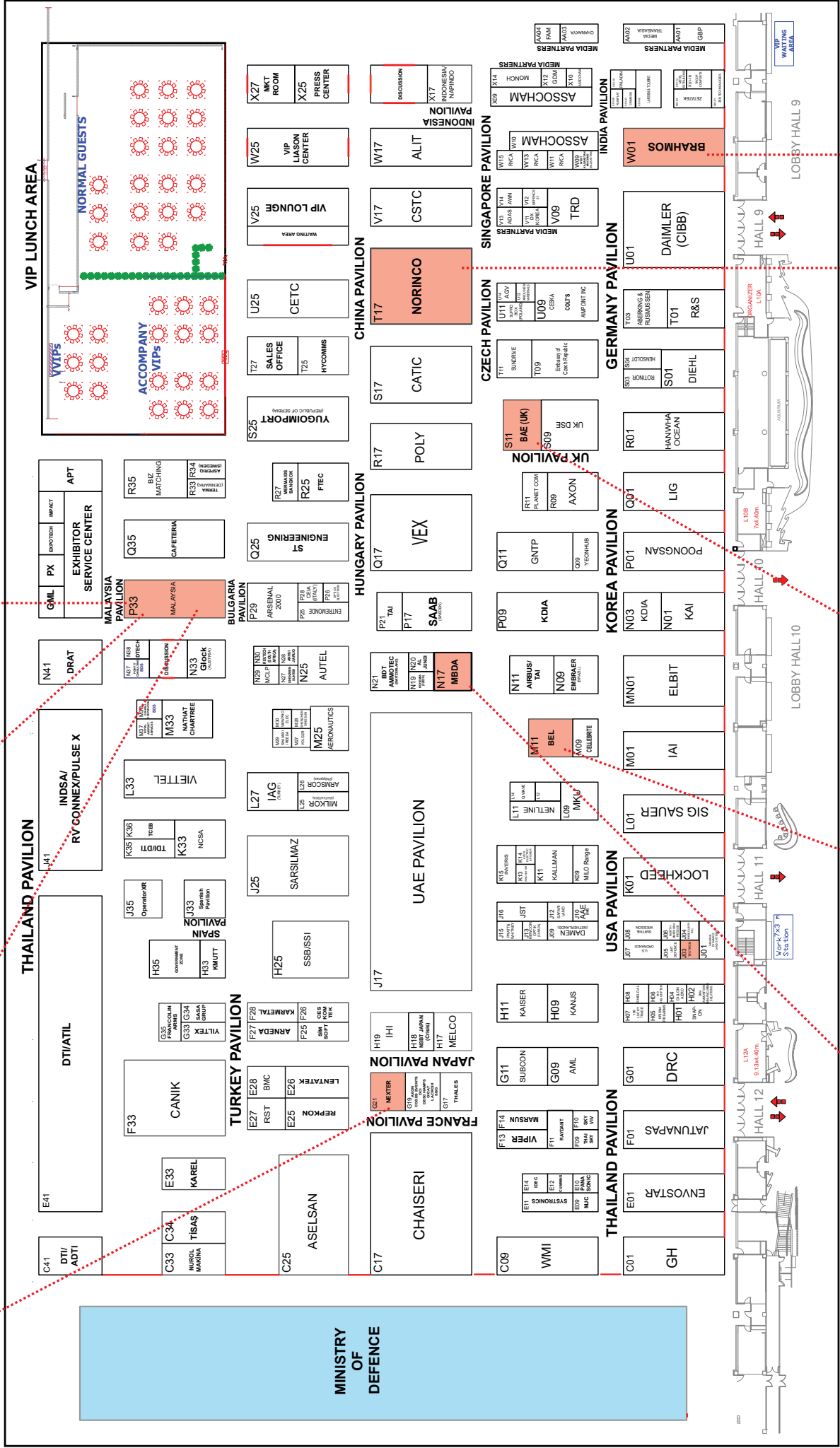
the 40mm CTA ammunition to be as small as any 25mm round but as powerful as the 40mm/L40 Bofors ammunition.

It makes the whole system relatively small compared to its firepower. The T40 is, therefore, easy to integrate into vehicles such as the VBCI MkII infantry combat vehicle, a special turret on the JAGUAR combat and reconnaissance vehicle, and the land RAPIDFire made for ground and air close-in protection. Both the JAGUAR and the naval RAPIDFire are already in service within the French forces. ▲

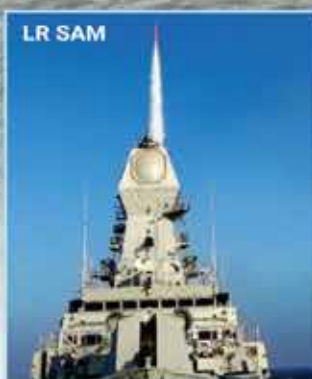


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Guardian of the Seas



LR SAM

- BEL is the lead integrator of LR SAM Systems
- Jointly developed by IAI, Israel and DRDO to defend against any type of airborne threat
- The system is capable of simultaneously tracking multiple seaborne targets

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