

The only conference to address the full spectrum of airborne threats from S-UAS to strategic Missile Defence

FULL SPECTRUM AIR DEFENCE

27 – 28 June 2023 · Hilton Syon Park, London

Defending Against New and Emerging Airborne Threats

2023 Expert Speakers Include



Air Vice Marshal Lincoln S. Taylor OBE
Chief of Staff Capability
Royal Air Force



Major General Sean Gainey,
Director, Counter-Unmanned Aircraft Systems Office,
US Army



Brigadier General Ignacio Ojeda González-Posada,
Commander of the Army Air Defense Command,
Spanish Army



Adam Aberle,
Director, Directed Energy Directorate,
US Army



Group Captain Gary Darby,
Head of Joint C-UAS Office,
UK MoD

“Exceptionally useful... I would highly recommend this event to those who seek to understand current and future capabilities across the entire Air Defence spectrum”

Commanding Officer, British Army

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Welcome

Dear Colleagues,

The Full Spectrum Air Defence (FSAD) Conference, now entering its 17th year, is a firm fixture on the calendar of defence professionals involved in mitigating airborne threats from Force Protection to Strategic Missile Defence.

Since our last in-person meeting, the war in Ukraine has illustrated the capabilities of a wide range of weapons from hypersonic missiles through to improved UAS, loitering munitions and drones. Modern air defence systems need to be able to confront this range of threats. NATO Allied and Partner nations are watching closely, identifying these threats, analysing responses, and evolving to confront them in future operations. The importance of air defence across the full spectrum of capabilities has been demonstrated thoroughly in Ukraine both through the successes but also the devastating consequences where air defence has been unavailable.

A key challenge is ensuring defence networks effectively counter aerial threats across all operating environments, from home airspace to deployed multinational forces. To ensure this is achieved successfully, integration of different capabilities must be prioritised to ensure air defence systems can maximise their ability to protect. With a focus on the strategic,

operational, and tactical levels, this conference will once again help inform and potentially shape the way forward across the entire spectrum of air defence.

Achieving secure and effective integration allows for the ability to coordinate capabilities between Allies, with this becoming especially significant as NATO Allies and Partner nations upgrade their air defence systems to confront modern threats. As great power competition and regional conflicts continue, the need for kinetic and non-kinetic systems coupled with integrated networks of sensors and secure command and control nodes will be required to address the constant proliferation of ballistic missiles, cruise missiles, hypervelocity systems, and unmanned aerial systems.

Full Spectrum Air Defence has established itself as the primary forum for the global air defence community by recognising changes to the strategic outlook, defining best operational practice, and enabling greater cooperation between international partners and air defence commands. I very much look forward to welcoming you back in-person in London to expand this conversation.

Kind regards,

Patrick Osborne
Conference Producer- Full Spectrum Air Defence 2023
Defence IQ

ATTEND FULL SPECTRUM AIR DEFENCE 2023 AND:



Reduce decision time from detection to interception

by improving the integration of air defence networks across operational domains



Improve interoperability between air defence structures,

both nationally and internationally through international collaboration.



Harness new technologies to counter high volume/low cost weaponry

in addition to BMD and Hypersonic threats



Discuss emerging trends and focuses

in the Great Power competition



Ensure your force is equipped to face future threats

by exploring new threat analysis and solutions

Conference Co-Chairs



Colonel (Ret.) Paul R. Daniels
Former Program Management & BD Leader,
Raytheon Missiles & Defense
FSAD 2023 Co-Chair

Paul Daniels was commissioned as an Army artillery officer in 1988. He served in numerous cannon and rocket artillery units, including operational deployments during the first Gulf War, Operation Uphold Democracy in Haiti, and Operation Iraqi Freedom. Paul also served as a strategic planner on the Army Staff, and as Special Assistant to the Commanding General, 1st Infantry Division in Tikrit, Iraq. He retired as a colonel and culminated his 24 year career as a founding member of US Africa Command, leading its Strategy and Policy Division and serving as a strategic advisor to the command's three-star deputy commander. After retiring from the US Army in 2012, he joined Raytheon Missile Systems (now Raytheon Missiles & Defense). Spending 10 years at Raytheon, Paul's broad domestic and international experience places him in a unique position to help military customers and defence companies accomplish their common goal of putting superior capabilities in the hands of U.S. and allied military service members. Paul is currently the President of P. Daniels Consulting LLC, a venture focused on helping defence companies—small and large—grow their business and enter new markets.



Colonel (Ret.) David Shank
Former Commandant,
U.S. Army Air Defence Artillery School
FSAD 2023 Co-Chair

David E. Shank is a U.S. Army veteran with over 30-years of leadership experience, having commanded at the executive level. As his final assignment, David served as the Chief Executive Officer to the U.S. Army Air Defense Artillery, responsible for publishing doctrine, organizational structure, training, materiel decision making, and leader development. David is recognized in the U.S., European, and Middle Eastern Air and Missile Defense communities for his expertise and contributions.. David graduated from the University of North Florida with a Bachelor of Arts Degree in Political Science, earned a Master of Science Degree in Military Studies from the U.S. Marine Corps Command and Staff College, and a Master of Science Degree in Strategic Studies from the U.S. Army Senior Service College. David currently serves as an Independent Consultant supporting a variety of integrated air and missile defence programs and initiatives. He is an advisory board member to Citadel Analytics (UK) Ltd., and the Missile Defense Advocacy Alliance, and resides in Florida, USA.

“The event was a great chance for me to re-immense myself into an Air Defence community, having been away for a couple of years. It was well organised, provide a lot of extremely valuable insights into the US, NATO and allied thinking around the new threats and has allowed me to initiate a number of new relationships to support me in my role”

UK Defence Solutions Centre

Full Speaker List



Major General Veiko-Vello Palm,
Estonian Division Commander,
Estonian Defence Forces



Air Vice Marshal Lincoln S. Taylor OBE,
Chief of Staff Capability,
Royal Air Force



Brigadier General Peter Gielen, Portfolio Manager,
Royal Netherlands Army



Brigadier General Ignacio Ojeda González-Posada,
Commander of the Army Air Defense Command,
Spanish Army



Colonel Lisa Bartel,
Deputy Commander,
10th Army Air Missile Defence Commander,
US Army



Dr Cristian Coman,
Principal Scientist,
NCIA



Colonel Nathan “Booster” Owen
Assistant to the Director, Missile Defense Agency
USEUCOM



Tarun Gupta,
Director for Directed Energy Project Office
RCCTO,
US Army



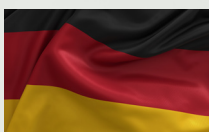
Adam Aberle,
Director,
Directed Energy Directorate,
US Army



Group Captain Gary Darby,
Head of Joint C-UAS Office,
UK MoD



Colonel Graham Taylor,
Commander
7th Air Defence Group,
British Army



Colonel Stefan Kern,
Department II (Capability Management)
Lead, Defence Planning Directorate,
Bundeswehr



Lieutenant Colonel Erlend Salomon Hammervik-Elvenes,
Branch Chief
GBAD,
Royal Norwegian Air Force








Brian Lihani,
Deputy Chief,
Domain Awareness – Terrestrial,
North American Aerospace Defence Command



Uzi Rubin,
Former Director,
Israeli Missile Defence Organization

DAY ONE - TUESDAY 27 JUNE

0800	MORNING REGISTRATION AND NETWORKING COFFEE
0850	DEFENCE IQ OPENING REMARKS Patrick Osborne , Conference producer, Defence IQ
0855	 CHAIRMAN'S OPENING REMARKS Colonel (Ret.) Paul R. Daniels , Former PM & BD Leader, Raytheon Missiles & Defense Colonel (Ret.) David Shank , Former Commandant, U.S. Army Air Defense Artillery School
0900	HOST NATION OPENING KEYNOTE: A UK PERSPECTIVE ON FUTURE AIR DEFENCE <ul style="list-style-type: none"> • Understanding contemporary threats, the war in Ukraine and the importance of control of the air • Force protection - Team Pellonia, building on NATO's Next Generation Air Survivability (NGAS) framework • A Future Integrated by design.... Achieving IOC for GUARDIAN and next steps • Future plans for C2 upgrade in order to ensure early warnings from NATO reporting centres to prepare the UK for incoming potential threats • Connected C2 able to deliver capability for Challenging and complex Combined, Joint, Multi-domain operations  Air Vice Marshal Lincoln Taylor , Chief of Staff Capability, Royal Air Force
0930	GROUND BASED AIR DEFENCE SYSTEMS IN THE FACE OF CURRENT THREATS <ul style="list-style-type: none"> • Current Threats • Layered Air Defence by Diehl Defence • Short Range GBAD System "IRIS-T SLS" • Medium Range GBAD System "IRIS-T SLM" □ combat proven! • Long Range GBAD System „IRIS-T SLX"  Mr. Arne Nolte , Head of Marketing, GBAD, Diehl
0950	THE DUTCH APPROACH ON INTEROPERABILITY AND INTERNATIONAL COOPERATION IN AIR AND MISSILE DEFENCE <ul style="list-style-type: none"> • Supporting fighting troops in assigned areas of responsibility • Defence Vision 2023: Fighting for a safer future • Developing decision support systems to ensure national air defence • Understanding future operational requirements in order to develop and acquire suitable systems • International collaboration with NATO and European partners  Brigadier General Peter Gielen , Portfolio Manager, Royal Netherlands Army
1020	MORNING COFFEE AND NETWORKING
1100	STRENGTHENING US AIR DEFENCE PRESENCE IN EUROPE <ul style="list-style-type: none"> • Overview of the 10th AAMDC: Missions, equipment and current priorities • Recent exercises and deployments • Lessons from the Ukrainian conflict and implications for US air defence in Europe  Colonel Lisa Bartel , 10th Army Air Missile Defence Deputy Commander, US Army

1130 **ELTA'S CONCEPTS AND SENSOR INTEGRATION FOR ADVANCED AIR SURVEILLANCE AND IAMD CHALLENGES**

- Insights and lessons-learned from global conflicts in recent years, in terms of sensing and generating situational awareness.
- Multi-sensor and multi-discipline sensor integration and synergy
- Implementation of advanced technologies to maximize the flexibility of the sensors array in response to advanced challenges and diverse scenarios.



Col. (Res.) Moshe Manor, Air and Missile Defense Operational Expert, **IAI ELTA**

1200 **PANEL DISCUSSION: PEELING THE GBAD ONION WITHOUT THE TEARS: INTEGRATING THE MULTIPLE LAYERS OF A FULL SPECTRUM AIR DEFENCE**

As we look to integrate multiple highly sophisticated air defence systems—each comprising their own sensors, effectors and C2 systems—each optimised to deal with a variety of airborne targets from ballistic missiles to small UAS, we will need a C2 system that seamlessly integrates and controls multiple other C2 systems tied to GBAD systems optimised for the long range, medium range, SHORAD and VSHORAD mission. What would such a system need to look like? With our expert panel, we will explore the following questions: Vision for a multi-domain GBAD system of C2 systems—what is the military customer expectation? How must such a system be architected?

- How open are open architectures?
- Thoughts on sensor fusion and data sharing: Integrating airborne assets—AWACS, tactical aircraft, space-based systems
- Lessons from Ukraine and thoughts on a practical concept of operations for the real world

Moderator

Colonel (Ret.) Paul R. Daniels, Former PM & BD Leader, **Raytheon Missiles & Defense**

Confirmed participants

Brigadier General Peter Gielen, Portfolio Manager, **Royal Netherlands Army**

Colonel Graham Taylor, Commander 7th Air Defence Group, **British Army**

Colonel (Ret.) Chris Bisset MBE, Land Domain Lead, Northrop Grumman UK, and former Commander of UK Attack Helicopter Force, **Northrop Grumman**

1300 **LUNCH AND NETWORKING**1400 **UPDATING AIR DEFENCE CAPABILITIES TO SUPPORT UK OPERATIONS**

- Threat from the air. Technological advances and lessons from RUS/UKR conflict.
- UK AD capability. Including SkySabre.
- Joint and NATO IAMD. Including lessons from Poland deployment.
- Future UK AD capability.



Colonel Graham Taylor, Commander 7th Air Defence Group, **British Army**

1430 **MOVING BEYOND INTEROPERABILITY TOWARD TRUE INTEGRATION FOR JOINT AND COALITION FORCES**

- Achieving true levels of network and command and control, sensor, and effector integration to create a decision advantage for Joint Force commanders
- Modular Open System Approach (MOSA) architecture to realize the promise of MDI and JADC2
- The transformational capability the Integrated Battle Command System (IBCS) will provide to the warfighters



Colonel (Ret.) William Lamb, Director, IBCS International Programs, **Northrop Grumman**

 1500 **REINFORCING AIR DEFENCE IN THE NORDIC REGION**

- Introduction of NATO operating procedures through training exercises with member states in the Nordic region
- Overview of Norwegian efforts to strengthen GBAD capabilities
- Norway's commitment to pan-Nordic defence cooperation in partnership with Denmark, Sweden, Finland and Iceland



Lieutenant Colonel Erlend Salamon Hammervik-Elvenes, Branch Chief GBAD, **Royal Norwegian Air Force**

 1530 **AFTERNOON COFFEE AND NETWORKING**

 1600 **PROMOTING SYSTEM OF SYSTEMS APPROACHES TO MISSILE DEFENCE**

- Overview of the Missile Defence Agency's approaches to optimising missile defence capabilities
- Introduction of system of systems approaches to deploy missile defence assets
- Industry engagement strategies to implement new solutions



Colonel Nathan Owen, Assistant Director Missile Defense Agency, **US EUCOM**

 1630 **GERMAN NATIONAL CONSIDERATIONS ON FUTURE AIR DEFENCE CAPABILITIES**

- German priorities for future air defence capability and development
- Ensuring integration in German Air Defence systems
- German Threat detection capability now and into the future across the spectrum of threats
- Project to increase the protection capability of Ground-Based Platforms against Threats in Low Level Airspace
- NATO Interoperability and the future for German Defence



Colonel Stefan Kern, Department II (Capability Management) Lead, Defence Planning Directorate, **Bundeswehr**

 1700 **CHANGING LANDSCAPE OF AIR AND MISSILE THREAT**

- Progression of the Full Spectrum Air Defence: From Low and Slow and UAVs to Hypersonic Threats
- Confronting the modern continuum of threat
- The new definition of defence architecture from 2000 to 2022






Uzi Rubin, Former Director, **Israeli Missile Defence Organization**

 1730 **CHAIRMAN'S SUMMARY REMARKS**

Colonel (Ret.) Paul R. Daniels, Former PM & BD Leader, **Raytheon Missiles & Defense**

 1745 **END OF DAY ONE AND DRINKS RECEPTION HOSTED BY RAYTHEON**

DAY TWO – WEDNESDAY 28 JUNE

0800	MORNING REGISTRATION AND NETWORKING COFFEE
0855	CHAIRMAN'S OPENING REMARKS Colonel (Ret.) Paul R. Daniels, Former PM & BD Leader, Raytheon Missiles & Defense Colonel (Ret.) David Shank, Former Commandant, U.S. Army Air Defense Artillery School
0900	KEYNOTE: DEPLOYING COUNTER-UAS ASSETS TO SECURE NATO'S EASTERN FLANK Major General Veiko-Vello Palm, Estonian Division Commander, Estonian Defence Forces
0930	ATTRITABLE SENSORS & ACTIONABLE DATA <ul style="list-style-type: none"> Defining the information parameters of the battlespace and the role sensors play The challenge of translating range requirements into actionable data Importance of base layer data fidelity in improving solution performance Achieving economic symmetry against inexpensive drones  Dr. Tom Driscoll , Chief Technology Officer, Echodyne
1000	MODERNISING US ARMY COUNTER SWARM UAS THREATS <ul style="list-style-type: none"> An overview of swarm UAS and its implications for future conflicts The US army's approach to defeating the growing threat posed by swarm UAS, challenges, and solutions the JCO are trialling.  Major General Sean Gainey , Director, Joint Counter-small UAS Office (JCO), US Army
1030	MORNING COFFEE AND NETWORKING
1100	DEVELOPING AND ENHANCING COUNTER-UAS CAPABILITIES AND TECHNOLOGIES <ul style="list-style-type: none"> Deploying new counter-measures to defend manoeuvre units against UAS An overview of rapid prototyping efforts to accelerate development of UAS threats  Tarun Gupta , Director for Directed Energy Project Office RCCTO, US Army

1130 **MULTI MISSION TACTICAL RADARS – GAME CHANGING NECESSARY BUILDING BLOCKS**

- Responding to attacks by inexpensive, accessible UAS, an ATGM or a Synchronized saturated mixed threats attack that combines both precise munitions and statistic ballistic threats
- Required capabilities to warn / engage / neutralize and achieve mission success - all start with effective real time reliable detection

DRS RADA TECHNOLOGIES

Alon Amitay, Vice President, Business Development & Marketing, **DRS RADA Technologies**1200 **CONFRONTING UAS AND NEXT GENERATION THREATS**

- High Energy Laser Science and Technology Efforts across the US Army
- Great Power threats and the realities of UAS
- Developing unambiguous counter-UAS doctrine

Adam Aberle, Director, Directed Energy, **US Army**1230 **LUNCH AND NETWORKING**1330 **SPANISH ARMY C-UAS EXPERIMENTATION**

- Overview of the Spanish Army's C-UAS strategy
 - what can we do with what we do have today.
 - short term (short budget) local improvements.
 - mid term requirements to industry.
- Integrating Counter UAS solutions into the Air Defence Command
- The importance of industry collaboration
- Establishing a clear framework for effective tactics against hostile UAS



Brigadier General Ignacio Ojeda González-Posada, Commander of the Army Air Defence Command, **Spanish Army**1400 **MODERN RADARS AND THEIR IMPACT ON AIR DEFENCE CAPABILITIES**

- The threat is more diverse than ever, and evolving at a faster pace than ever
- Modern sensors and their role on the battlefield
- How to maintain a fast OODA-loop

Lars Krogh Vammen, Business Development Director, Teamlead, **Weibel Scientific**1420 **BALANCING UK MILITARY GLOBAL C-UAS OPERATIONS WITH DEFENDING THE HOMELAND**

- Deploying counter-UAS efforts to avoid strategic failure on operations through UAS attacks
- Engaging with SMEs to keep pace with evolving technologies, and industrialise existing engagement channels to promote further co-operation

Group Captain Gary Darby, Head of Joint C-UAS Office, **UK MoD**1450 **AFTERNOON COFFEE AND NETWORKING**

<p>1530</p> 	<p>TESTING AND EVALUATING NEW COUNTER-UAS CAPABILITIES</p> <ul style="list-style-type: none"> • Overview of the Rapid Innovation Cell and work to test and evaluate counter-UAS capabilities to generate a managed defence database of capabilities available • Uses of Sapient open architecture to allow for the quick developments of capabilities <p>Peter Clarke, Head of C-sUAS Rapid Innovation Cell, Defence UAS Capability Development Centre, UK MoD</p>
<p>1600</p> 	<p>SYSTEM OF SYSTEM OF SYSTEMS APPROACHES TO COUNTER-UAS STRATEGIES</p> <ul style="list-style-type: none"> • Overview of NCIA’s work to create a C2 system across counter-UAS capabilities • Challenges associated with implementing systems • Co-operation with NATO member states and industry <p>Dr Cristian Coman, Principal Scientist, NCIA</p>
<p>1630</p>	<p>PANEL DISCUSSION: PROMOTING INDUSTRY-MILITARY ENGAGEMENT IN COUNTER-UAS STRATEGY <i>Counter-UAS assets will become essential for future operations. To meet new counter-UAS requirements, allies are funding exploitable innovation within the support new projects. They are doing this by strengthening relations with SMEs and developing robust procurement criteria when selecting solutions.</i></p> <ul style="list-style-type: none"> • What are the key gaps in counter-UAS research and development? • How is engagement with the commercial sector changing in response to emerging UAS threats? Why was this change needed? • What are the key elements of a successful industry-military engagement strategy when dealing with SMEs? • What unique challenges are faced by SMEs in dealings with the military and how can they be addressed? <p>Moderated by Colonel (Ret.) David Shank, Former Commandant, U.S. Army Air Defense Artillery School</p> <p>Confirmed participants: Group Captain Gary Darby, Joint C-UAS Team Lead, UK MoD Colonel William Parker, Deputy Director, Joint Counter-small UAS Office (JCO), US Army</p>
<p>1715</p>	<p>CHAIRMAN’S SUMMARY REMARKS Colonel (Ret.) Paul R. Daniels, Former PM & BD Leader, Raytheon Missiles & Defense Colonel (Ret.) David Shank, Former Commandant, U.S. Army Air Defense Artillery School</p>
<p>1730</p>	<p>END OF CONFERENCE</p>



Enhanced Networking Opportunities at FSAD 2023!

Hosted alongside the Full Spectrum Air Defence conference are two specialist forums that bring together subject matter experts and technical leaders from military, industry and R&D establishments. The first, Military Radar, looks at the improvement of detection, monitoring and early warning capabilities. The second, Directed Energy Systems, explores getting directed energy into the hands of the warfighter. Benefiting from a shared networking space, by attending FSAD you will be able to meet with additional groups of experts beyond the core participants of the FSAD conference. Further details of these events can be found below.

26 June 2023

27 June 2023

28 June 2023

29 June 2023



Since its conception, DES has gained a reputation as Europe's premier international forum for all elements of the directed energy systems community, with an emphasis on the military users of such technology. While technical and scientific elements will be covered, the focus will continue to be on the future of militarily useful DE and the next steps required for these systems expand their uses on platforms and into operations.

Directed energy systems have now advanced to the point where they can now be used in operational environments. Therefore, it is critical that nations understand how best to enhance these weapons to maximise their advantage in the hands of the warfighter and counter the threats to their own capabilities when in the hands of the adversary.

Attendees will:

- > **Understand** the challenges involved in integrating laser directed energy weapons into land, sea and air platforms and case studies of how these have been overcome
- > **Learn how** other nations are accelerating the adoption of directed energy and getting this technology into the hands of the warfighter
- > **Discuss how** CONOPS are being developed as this technology is fielded, tested and evaluated while developing new methods of employment
- > **Apply** non-lethal directed energy systems in military settings through case studies of both military and civilian use



While military radar systems have been a staple of military operations for a number of years, the requirement on these systems remains in consistent flux, as new threats emerge in UAVs, missile systems and Electronic Warfare (EW) capabilities. With the threat now developing across every spectrum, ensuring 360 degree radar coverage has become a priority for the radar operators worldwide. Now in its seventeenth iteration, Military Radar has built a reputation as a leading forum focused on the technical and scientific developments of radar systems. Drawing together operators and technical experts, Military Radar is a unique forum to learn and network.

Attendees will:

- > **Learn** to equip your forces with constant situation awareness by developing cognitive and autonomous radar systems
- > **Understand how** civilian and military resources can coordinate to take maximum advantage of a congested air space
- > **Hear from** key thought-leaders in the Radar community including the latest challenges and requirements for the next generation of radar technology
- > **Learn to** deliver maximum situational awareness for your operators by developing airborne and seaborne radar platforms
- > **Maximise** radar's utility as a force multiplier by developing multi-system platforms

Venue: The Hilton Syon Park

A countryside escape steeped in history. We're on the edge of the 200-acre Syon Park Estate, home to the Duke of Northumberland for over 400 years. Syon Lane rail station is a mile away, and we're three miles from Twickenham Stadium. Our hotel features a spa and indoor pool with whirlpool. Complimentary access to Syon Gardens completes your stay.

Maximise Your Involvement: Sponsorship and Exhibition Opportunities

Invest in making an impact with the people that matter to your business

Sponsorship is the most effective solution to share your company's idea with senior decision-makers who are actively seeking to enhance air defence through improvements to their networked sensors, secure command and control nodes as well as kinetic and non-kinetic effectors.

Full Spectrum Air Defence 2023 will be attended by senior officials and decision-makers from the air defence, detection and battle management industries, bringing together buyers and suppliers in one location. With tailored networking, sponsors can achieve the face-to-face contact that overcrowded trade shows cannot deliver.


Exhibiting and Sponsorship options are extensive, and packages can be tailor-made to suit your individual company's needs.

Features of sponsorship include:

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- ➔ Thought leadership speaking opportunities
- ➔ Participation in comprehensive pre event marketing campaigns
- ➔ Tailored networking solutions

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About Defence iQ

Defence 

Established in 2001, Defence iQ has grown to become one of the world's largest defence publications and events organisations. We are uniquely positioned to engage with and support the international defence community via our digital platform and global conferences, all of which are underpinned by rigorous research into global defence policy, acquisition strategy, capability development, and military leadership.

www.defenceiq.com

“I would highly recommend this event to those who seek to understand current and future capabilities across the entire Air Defence spectrum”

Commanding Officer, British Army



Two Star Partners



Diehl Defence GmbH & Co. KG is a leading European system house in the field of modern guided missiles. The product range includes ammunition solutions in the medium and large caliber range as well as sensors and security systems for reconnaissance, surveillance and protection. The portfolio also encompasses airborne, land-based and sea-launched missile solutions as well as ground-based air defence systems. Products and services in the fields of training, after-sales service and packaging systems complement the portfolio.

www.diehl.com/defence/en/



DRS RADA Technologies is a pioneer of combat-proven, multi-mission radars for enhanced survivability of operations. The on-the-move and static tactical radars improve all-threat air & surface detection across multiple land and maritime applications:

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www.drsrada.com



Echodyne offers the highest performing compact, software-defined, solid-state, true electronically scanned array (ESA) radar sensors. Ideally suited for securing ground and airspace perimeters, Echodyne's commercially priced radars are used by governments, industries, and solution integrators for counter-drone, border and perimeter security, and comprehensive critical infrastructure protection.

www.echodyne.com



Israel Aerospace Industries (IAI) is a world-class aerospace and defense company innovating and delivering state-of-the-art technologies in space, air, land, naval, cyber & homeland security for defense and commercial markets. Combining the "Start-up Nation" spirit of innovation with decades of combat-proven experience, IAI provides customers with tailor-made, cutting-edge solutions to the unique challenges they face including satellites, UAVs, missiles, intelligence solutions, weapon systems, air defense systems, robotic systems, radars, business jets, aerostructures, and more. Established in 1953, IAI is one of Israel's largest technology employers with offices and R&D centres in Israel and abroad.

www.iai.co.il



Northrop Grumman is a leading global aerospace and defense technology company. Our pioneering solutions equip our customers with the capabilities they need to connect and protect the world and push the boundaries of human exploration across the universe. Driven by a shared purpose to solve our customers' toughest problems, our 95,000 employees define possible every day.

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The complex requirements imposed on short- and very short-range air defence have become much more complex in recent years. Both quantitatively and qualitatively, the air threat continues to mutate and multiply. Increasingly, the emphasis is on unmanned air vehicles and precision guided munitions that are smaller, faster and more agile than ever: only the most sophisticated air defence systems can stop them.

Rheinmetall is one of the world's foremost makers of advanced air defence systems. The company leads the global market in automatic cannon-based air defence and is the sole system supplier able to offer fire control technology, automatic cannon, integrated guided missiles and Ahead© airburst ammunition.

Ground forces all over the world count on Rheinmetall's state-of-the-art air defence solutions. Fully automated and extremely effective, our high-performance systems are ideal for protecting forward operating bases and other high-value assets from modern asymmetric threats. Thanks to the company's Ahead© technology, they can take out even the smallest targets.

Rheinmetall Defence – Rheinmetall Air Defence AG
rheinmetall-defence.com



Building on more than 45 years' of experience Weibel Scientific develops, manufactures and sells the world's most advanced Doppler radars. At Weibel, we are – and have been for more than 45 years – driven by one overarching goal: To push the boundaries of physics and deliver "tip of the spear" capabilities to users worldwide. Since 1977, we have delivered more than 5,000 radars to customers in more than 40 countries. Of those, more than 4000 are installed on artillery, naval guns and heavy mortar systems worldwide.

Weibel provides a wide range of radar systems for use in military defense applications, including muzzle velocity radars for artillery and mortars, drone detection, and short-range air defense. Whether installed on fixed or mobile weapons installations, their radars are designed to withstand the rigors of combat, as well as the most extreme conditions – from severe cold to high heat, dry to humid, as well as sand, snow, hail and rain.

www.weibelradars.com

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Raytheon Company is a technology and innovation leader specializing in defense, civil government and cybersecurity solutions. With a history of innovation spanning 97 years, Raytheon provides state-of-the-art electronics, mission systems integration, C5I© products and services, sensing, and mission support for customers in more than 80 countries. More than 2,500 Raytheon employees call Europe home, and the continent accounts for two-thirds of our international partners. We have a long history of collaboration with European industries, working with large and small organizations alike to grow local capacity and transfer knowledge. We understand that the best solutions involve critical technologies from both sides of the Atlantic. This collaboration – and shared investment in smart defense – can deliver proven, interoperable systems to close capability gaps. Follow us on Twitter.

www.raytheon.com

FULL SPECTRUM AIR DEFENCE

27 – 28 June 2023
Hilton Syon Park, London

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Travel and accommodation are not included in the registration fee.

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You can access a variety of free resources such as whitepapers, articles, news, podcasts and presentations online at www.defence-iq.com

TERMS AND CONDITIONS

Please read the information listed below as each booking is subject to IQPC Ltd standard terms and conditions. **Payment Terms:** Upon completion and return of the registration form, full payment is required no later than 5 business days from the date of invoice. Payment of invoices by means other than by credit card, or purchase order (UK Plc and UK government bodies only) will be subject to a £49 per delegate processing fee. Payment must be received prior to the conference date. We reserve the right to refuse admission to the conference if payment has not been received. **IQPC Cancellation, Postponement and Substitution Policy:** You may substitute delegates at any time by providing reasonable advance notice to IQPC. For any cancellations received in writing not less than eight (8) days prior to the conference, you will receive a 90% credit to be used at another IQPC conference which must occur within one year from the date of issuance of such credit. An administration fee of 10% of the contract fee will be retained by IQPC for all permitted cancellations. No credit will be issued for any cancellations occurring within seven (7) days (inclusive) of the conference. In the event that IQPC cancels an event for any reason, you will receive a credit for 100% of the contract fee paid. You may use this credit for another IQPC event to be mutually agreed with IQPC, which must occur within one year from the date of cancellation. In the event that IQPC postpones an event for any reason and the delegate is unable or unwilling to attend in on the rescheduled date, you will receive a credit for 100% of the contract fee paid. You may use this credit for another IQPC event to be mutually agreed with IQPC, which must occur within one year from the date of postponement. Except as specified above, no credits will be issued for cancellations. There are no refunds given under any circumstances. IQPC is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. IQPC shall assume no liability whatsoever in the event this conference is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of this conference impracticable, illegal or impossible. For purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency. Please note that while speakers and topics were confirmed at the time of publishing, circumstances beyond the control of the organisers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. As such, IQPC reserves the right to alter or modify the advertised speakers and/or topics if necessary without any liability to you whatsoever. Any substitutions or alterations will be updated on our web page as soon as possible. **Discounts:** All 'Early Bird' Discounts require payment at time of registration and before the cut-off date in order to receive any discount. Any discounts offered by IQPC (including team discounts) also require payment at the time of registration. Discount offers cannot be combined with any other offer.

PAYMENT MUST BE RECEIVED PRIOR TO THE CONFERENCE

Vendors and Solution Providers	2 Day
Register & pay by Friday 28th April 2023*	SAVE £400 £2,299 + VAT
Register & pay by Friday 12th May 2023*	SAVE £300 £2,399 + VAT
Standard Price	£2,699 + VAT

Military/Government**	2 Day
Register & pay by Friday 28th April 2023*	SAVE £600 £399 + VAT
Register & pay by Friday 12th May 2023*	SAVE £300 £699 + VAT
Standard Price	£999 + VAT

*To qualify for early booking discounts, payment must be received by the early booking deadline.

All prices are exclusive of UK VAT is charged at 20%. VAT Registration #: GB 799 2259 67

**Military and government discounted rates apply to serving military officers, government, and university personnel only.

Serving Generals/Flag Officers 1 Star and above may attend the conference free of charge.

Please contact enquire@defenceiq.com for further details.

DELEGATE DETAILS

Please photocopy for each additional delegate

Mr Mrs Miss Ms Dr Other

First Name

Family Name

Job Title

Tel No.

Work Email

Yes I would like to receive information about products and services via email

IQPC Point of contact

Organisation

Nature of business

Address

Postcode Country

Telephone

Fax

Approving Manager

Name of person completing form if different from delegate

I agree to IQPC's cancellation, substitution and payment terms

Special dietary requirements: Vegetarian Non-dairy Other (please specify)

Please indicate if you have already registered by: Phone Fax Email Web

Please note: if you have not received an acknowledgement before the conference, please call us to confirm your booking.

PAYMENT

Total price for your Organisation
(Add total of all individuals attending):

Billing address (if different from above):

Credit Card: please phone to process payment

Invoice: please send me an invoice (subject to £49 + VAT processing fee per delegate)

Cheque: please enclose a cheque payable to IQPC Ltd for £