



Centre for Joint Warfare Studies

SURVEILLANCE & ELECTRO-OPTICS INDIA 2024

Manekshaw Centre, New Delhi

INDIAN MILITARY REVIEW

IMR

22 March 2024

Seminar & Expo

Night Vision (Thermal & IR)



Aerial systems



Ground systems



Space-based EO sensors



Underwater systems



Aerial surveillance



Hand-held Devices

- Infrared (IR) cameras
- Laser rangefinders
- Night vision goggles
- Thermal imaging cameras
- Heads-up displays (HUDs)
- Infrared aiming lasers

Ground Surveillance Systems:

- Early Warning Radar, Ground Surveillance Radar.
- Thermal Cameras, Infrared Sensors, Acoustic Sensors.
- Surveillance Vans, Mobile Radar Units.
- Perimeter intrusion detection systems
- Security cameras
- Motion sensors

- Access control systems

Space Surveillance Systems:

- Imaging, Communications Satellites
- Electronic Intelligence Satellites.
- Optical Space Telescopes, Radio Space Telescopes.
- Satellite-based Infrared Sensors, Radio Frequency Sensors.

Aerial Surveillance Systems:

- Electro-optical cameras
- Laser designators
- Synthetic aperture radar (SAR)
- Electro-optical/infrared (EO/IR) sensors
- Synthetic aperture radar (SAR)
- Electronic intelligence (ELINT) sensors

- Communications intelligence (COMINT) sensors
- Aerial imagery
- Thermal imaging cameras
- Light Detection and Ranging (LiDAR)
- Multispectral Camera

Underwater Surveillance Systems:

- Remotely Operated Underwater Vehicles (ROVs)
- Autonomous Underwater Vehicles
- Active Sonar, Passive Sonar.
- Segmented cylinder transducers
- Low-frequency Tonpilz transducers
- Electro-optical cameras underwater imaging
- Underwater spectrophotometry

14th Edition - Longest Running Surveillance & E-O Event

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The rapidly evolving landscape of military surveillance and electro-optics demands a collaborative platform where armed forces, defense industry professionals, and researchers can converge to explore the latest advancements, share insights, and foster innovation. To focus on this need, the event will include Terrestrial, Aerial and Space-based, Maritime and Underwater Surveillance, and Research & Development within the realm of military surveillance and electro-optics.

Objectives

The primary objectives of the seminar are to:

- (a) **Review Latest Advancements.** Provide a detailed overview of the cutting-edge technologies and innovations in the field of military surveillance and electro-optics.
- (b) **Facilitate Collaboration.** Bring together armed forces and the defense industry to facilitate meaningful discussions, enabling them to better understand each other's requirements and capabilities.
- (c) **Knowledge Exchange.** Foster a platform for knowledge exchange, where participants can share experiences, best practices, and lessons learned.
- (d) **Research & Development Showcase.** Highlight the latest developments in research and development, encouraging collaboration between academic institutions, research organizations, and industry players.

Seminar Structure

The seminar will be organized into four key segments, each focusing on a specific aspect of military surveillance and electro-optics.

- (a) **Terrestrial Surveillance.** To include:
 - (i) Advances in Ground-Based Radar Systems.
 - (ii) Unmanned Ground Vehicles for Surveillance.
 - (iii) Night Vision Technologies for Land Forces.
 - (iv) Sensor Integration and Data Fusion on the Battlefield.
- (b) **Aerial and Space-Based Surveillance.** To include:
 - (i) Satellite-based Earth Observation Systems.
 - (ii) High-Altitude Long-Endurance (HALE)

Knowledge Partner



Unmanned Aerial Vehicles.

(iii) Advancements in Airborne Reconnaissance Systems.

(iii) Space-based Imaging Technologies for Military Applications.

(c) **Maritime and Underwater Surveillance.** To include:

- (i) Underwater Drones and Autonomous Submersibles.
- (ii) Naval Surveillance Radar Systems.
- (iii) Satellite-based Maritime Domain Awareness.
- (iv) Sonar Technologies for Submarine Detection.

(d) **Research & Development.** To include:

- (i) Emerging Technologies in Electro-optics.
- (ii) Artificial Intelligence and Machine Learning in Surveillance.
- (iii) Materials Innovation for Stealth Technologies.
- (iv) Quantum Technologies in Military Surveillance.

Expected Outcomes

- (a) **Enhanced Collaboration.** Forge new partnerships and strengthen existing collaborations between armed forces and the defense industry.
- (b) **Informed Decision-Making.** Equip participants with the knowledge needed to make informed decisions regarding procurement, strategy, and technology adoption.
- (c) **Networking Opportunities.** Provide a platform for networking, allowing participants to connect with experts, researchers, and industry leaders in the field.
- (d) **Future Roadmap.** Contribute to the development of a shared vision and roadmap for the future of military surveillance and electro-optics.

The seminar on Military Surveillance & Electro-optics aims to be a catalyst for progress in the field, fostering collaboration and innovation among key stakeholders. By bringing together the armed forces, defence industry, and research community, the event will contribute to the advancement of technologies that play a critical role in ensuring the conduct of successful operations.

SEMINAR PROGRAMME

Friday, 22 March 2024

0830 - 0930 hrs Welcome Tea

SESSION 1 – INAUGURAL SESSION (0930 – 1045 hrs)

Welcome Address **Maj Gen (Dr) Ashok Kumar**, VSM, Retd, Director General, Centre for Joint Warfare Studies.
Inaugural Address **Lt Gen DS Rana**, AVSM, YSM, SM, Director General, Defence Intelligence Agency.
Keynote Address **Air Mshl Surat Singh**, AVSM, VM, VSM, Director General Air Ops, Air HQ.
Special Address **Dr BK Das**, OS & DG Electronics & Commication (ECS), DRDO
Industry Perspective **Col KV Kuber**, Director Defence & Aerospace, Ernst & Young.
Release of Report EY-IMR Knowledge Paper on Surveillance & Electro-optic Devices

1045 – 1115 hrs Refreshments & exhibition.

SESSION 2 – TERRESTRIAL SURVEILLANCE (1115 – 1330 hrs)

Chairperson: **Brig JS Sidhu**, Brig (T&WS), Army Design Bureau.

1115 – 1130 hrs Introduction and Opening Remarks by the Chairman.

1130 – 1145 hrs Surveillance of the Battlefield and present status of Project Sanjay. **Brig Anurag Asthana**, Brig Ops, Artillery Directorate, Army HQ.

1145 – 1200 hrs Challenges in Border Surveillance at Night. **Sh Madhukar**, IG (Ops), FHQ, BSF.

1200 – 1215 hrs Latest developments in tracking threats and C&R for Air Defence. **Col Sameer Babu**, Colonel (C&R), Army AD Directorate, Army HQ.

1215 - 1230 hrs Electro-Optics: Shaping Modern Warfare & Defense Strategies-Learnings, Lessons & Implication In 2024. **Vaibhav Gupta**, Director, MKU Ltd.

1230 – 1245 hrs Advanced integrated applications utilizing high definition format IR detectors. **Ram Biron**, Director of Marketing, SCD, Israel.

1245 – 1300 hrs Assisted & Automated Surveillance. **Sandeep Shah**, Managing Director, Optimized Electrotech.

1300 – 1315 hrs Rechargeable Li-Ion Batteries for Military Devices. **Abhinav Gupta**, Managing Director, SES.

1315 – 1330 hrs Products and Solutions in Electro-optics. **Vinod Yadav**, Head-Technical (Optronics & Computing Platforms), Tata Advanced Systems Limited

1330 – 1345 hrs Complete Solutions for Next-Generation Electro-Optical Systems. **Ramakrishna Siddam**, General Manager, Optica.

1345 - 1430 Lunch & exhibition

Session 2 contd

1430 – 1445 hrs Q&A/ Discussion.

SESSION 3 – AERIAL AND SPACE BASED SURVEILLANCE (1445 – 1615 hrs)

Chairperson: **Air Vice Mshl Rajiva Ranjan**, ACAS Ops (Space), Air HQ

1445 – 1500 hrs Introduction and Opening Remarks by the Chairman.

1500 – 1515 hrs UAV sensor payloads for persistent surveillance. **Col Jasbir Sing Mann**, Army Aviation Directorate.

1515 – 1530 hrs Space-based ISR for early warning. **Wg Cdr Aruna Singh**, DIPAC, Defence Space Agency

1530 – 1545 hrs Latest developments and requirements for Tactical Recce (EO, SAR, IR Search). **Speaker from DG Ops Air, Air HQ.**

1545 – 1600 hrs Need to augment airborne surveillance (AEWS). **Speaker from DG Ops Air, Air HQ.**

1600 – 1615 hrs Intelligence Gathering with EO Sensors for Today's Missions. **Dr Manvendra Singh**, Sc G, IRDE, DRDO.

1615 – 1630 hrs Q&A/ Discussion.

SESSION 4 – MARITIME SURVEILLANCE, RESEARCH & DEVELOPMENT (1630 – 1730 hrs)

Chairperson: **Cmde Ashish Bhargava**, Cmde Air Warfare & Flight Safety, Naval HQ

1630 – 1645 hrs Introduction and Opening Remarks by the Chairman.

1645 – 1700 hrs Surveillance against aerial, surface and underwater threats. **Comdt VD Singh**, Jt Dir Communications, Indian Coast Guard.

1700 – 1715 hrs Facets of Maritime Surveillance. **Cdr K Varun**, Cdr (AW), ACNS (Air), Naval HQ.

1715 – 1725 hrs Closing Address. **Maj Gen (Dr) Ashok Kumar**, VSM, Retd, Director General, CENJOWS

1725 – 1730 hrs Vote of Thanks. **Maj Gen Ravi Arora**, Retd, Chief Editor Indian Military Review.

1730 hrs Refreshments and close.

Rate Card

DELEGATE PASS

VALID FOR FULL DAY INCLUDES LUNCH

Rs 5,900

Delegate Pass Price includes:

1. Attending all sessions
2. Visit exhibition booths.
3. Interacting with sponsors, exhibitors, speakers & delegates
4. All refreshments and lunch
5. Video link of proceedings after the event.

Transferable and refundable if cancelled 48 hrs before the event.

ECO STARTUP

EXHIBITION BOOTH

LOW COST FEATURE RICH

Rs 118,000

1. One furnished octonorm exhibition booth 2X2M.
2. Company profile 200 words with Logo, contact details in event guide.
3. Half page advt in show guide
4. Two delegate passes
5. Contact data of all delegates and video links after the event.
6. Fascia, logo, 1 table, 2 chairs, carpet, 2 lights, power box, dustbin at booth

PREMIUM BOOTH

FOR MORE FOOTFALLS

Rs 236,000

1. One furnished octonorm exhibition booth 3X3M.
2. Company profile 300 words with Logo, contact details in event guide
3. Half-page advt in Event Guide
4. Three Delegate Passes and three Exhibitor passes
5. Contact data of all delegates and video links after the event.
6. Company Logo on Stage as Exhibitor
7. Distribute one Company literature item in Delegate Bags
8. Fascia, logo, 1 table, 4 chairs, carpet, 3 lights, power box, dustbin at booth.

ADDITIONAL BRANDING OPPORTUNITIES

- | | |
|--|------------|
| • Delegate Lanyards (non-exclusive) with Company Logo both sides | Rs 118,000 |
| • Registration Sponsor with Company Logos at all counters | Rs 118,000 |
| • Luch Sponsorship with Banner | Rs 94,400 |
| • Standee banner (3x6ft) at Entrance, each | Rs 10,000 |
| • Banner (8x10ft) at Entrance, each | Rs 25,000 |

BRONZE SPONSOR

MULTIPLE BENEFITS WITH SPEAKING AND BRANDING

Rs 354,000

1. Speaking Slot 15 mins
2. 3x3m furnished octonorm booth
3. Five Delegate Passes and three Exhibition staff Passes
4. Full Page Advt in Event Guide
5. Company Profile (500 words with logo, contact details) in Event Guide
6. Two company literature items/gift in Delegate Bags
7. Delegate List with contact details after the event.
8. Video of speakers' presentations after the event
9. Sponsor Logo on event promotion
10. Logo on all marketing materials
11. Banner on Event website
12. Company Logo at Venue, Lobby and on Stage as Sponsor
13. Fascia, logo, 1 table, 4 chairs, carpet, 3 lights, power box, dustbin at booth.

SILVER SPONSOR

MULTIPLE BENEFITS WITH SPEAKING AND BRANDING

Rs 472,000

1. Speaking Slot 15 mins
2. 4x3m furnished octonorm booth
3. Six Delegate Passes and four Exhibition staff Passes
4. Full Page Advt in Event Guide
5. Full Page Company Profile (with logo and contact details) in Event Guide
6. Two company literature items/gift in Delegate Bags
7. Delegate List with contact details after the event.
8. Video of speakers' presentations after the event
9. Sponsor Logo on event promotion
10. Logo on all marketing materials
11. Banner on Event website
12. Company Logo at Venue, Lobby and on Stage as Sponsor
13. Fascia, logo, 2 tables, 6 chairs, carpet, 4 lights, power box, dustbin, magazine rack at booth.

GOLD SPONSOR

MULTIPLE BENEFITS WITH SPEAKING SLOT

Rs 590,000

1. Speaking Slot 15 mins
2. 6x3m furnished octonorm booth
3. Twelve Delegate Passes
4. Full Page Advt in Event Guide
5. Full Page Company Profile (with logo, contact details) in Event Guide
6. Two company literature items/gift in Delegate Bags
7. Delegate List with contact details after the event.
8. Video of speakers' presentations after the event
9. Sponsor Logo on event promotion
10. Logo on all marketing materials
11. Banner on Event website
12. Prominent Company branding at Venue, Lobby and on Stage as Gold Sponsor
13. Buntings on 4 poles at venue.
14. Custom Fascia, logo, 4 tables, 8 chairs, carpet, 6 lights, 2 power boxes, dustbin, 42" LED at booth.

Contact IMR Media for additional furniture, LEDs, customisation and Backdrop flex/ vinyl baneers

IMR Media Pvt Ltd

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