



The Centre for Joint Warfare Studies & Indian Military Review present





Seminar & Exhibition

Manekshaw Centre, New Delhi





The First and Longest Running UAV Event in India



Unmanned aerial vehicles • Control/guidance systems

- Electro-optics Payloads Target vehicle Training and simulation UAV components & accessories
- Ground support equipment Policy, Rules & Regulations



UAS India 2023



Military Applications of UAVs.

Some of the important uses include:

- Information, Surveillance, Target Acquisition, and Reconnaissance (ISTAR).
 - Unmanned combat aerial vehicles (UCAV).
 - Radar and Communication Relay.
 - Mapping Military Logistics.
 - Nuclear Cloud Surveillance.

Armed Drones. ADE has completed the development of the Rustom-2 TAPAS (Tactical Airborne Platform for Aerial Surveillance) MALE UAV (a MQ-1 category drone). HAL will soon start the production of first five units of TAPAS drones.

In total 76 units of this UAV will be ordered by forces. There will be 60 drones for Indian Army, 12 for the Indian Air Force and 4 for the Indian Navy.

Drone Technology

What information technology was in the 90s, drone technology is today. Technologies that the nation needs to invest in, are:

- Powertrain Technology Brushless Direct Current Motor.
- Powertrain Technology Fuel-Run Motor
- Powertrain Technology Electronics
- Flight Controller
- Battery Technology
- Datalink Technology
- Making Bandwidth Available For Civilian Use

Some emerging technologies have the potential to enhancing effectiveness of drones, viz,

- Artificial Intelligence.
- Internet of Things (IoT).

Indian Air Force

A Combat Air Teaming System (CATS) is a planned unmanned and manned combat aircraft air teaming system being developed by HAL, which is of interest to the IAF. An armed stealth drone will team up and fight alongside IAF fighters to hit high-value enemy targets. It is designed to carry out MUM-T Operations.

The Unmanned Wingman will be connected to a heavily upgraded IAF Jaguar fighter bomber.

HAL is designing & developing AI powered, stealthy autonomous swarm drones known as ALFA-S

DRDO is developing the Ghatak which is an UCAV for the IAF. The Aura UCAV will be a tactical stealth aircraft capable of delivering laser-guided strike weapons.

Indian Army

The army's existing unmanned systems' fleet comprises Heron

medium-altitude, long-endurance (MALE) UAVs, and the smaller Searcher Mark II tactical drones.

The Army plans to buy high-tech unmanned aerial vehicles (UAVs) to strengthen its intelligence, surveillance and reconnaissance (ISR) capabilities and improve the effectiveness of its military operations.

Indian Navy

The Indian Navy currently operates Israeli-origin Heron and Searcher Mk-II UAVs, but neither is shipborne. It also has Sea Guardian drones on lease.

The Indian Navy announced its plans, in June 2022, to acquire 40 Naval Unmanned Aerial Systems (NUAS) for more than 100 meters long warships.

Research & Development

DRDO tested, in early-July 2022, the Autonomous Flying Wing Technology Demonstrator, which is a major step ahead of developing unmanned aerial combat vehicles (UCAV), primarily for the Indian Air Force

Countering Drones

Drones are hard to detect, do not have a significant visual, radar, infrared or noise signature, and require minimal infrastructure to launch and control. Drones are best countered by effective jamming and laser systems.

DRDO's D-4 anti-drone system can provide both "soft kill" (jamming of hostile drones) and "hard kill" (a laser-based destruction method) options to the military to tackle fast-emerging aerial threats. It has been used for VIP protection on National Days' events.

Adani Defence & Aerospace has linked with DRDO and Israel's Elbit Systems to begin deploying counter-UAS equipment in some of the country's major airports.

UAV Industry

According to the Civil Aviation Minister, by 2026, the Indian drone industry will achieve a turnover of over Rs 15,000 crore. India is home to 270 startups in the drone technologies business. He has stated that the country will be a global leader in drones by 2030.

PLI Scheme. The government announced the Production-Linked Incentive scheme on 16 Sep 2021 which provides for funding 20 per cent of the "value addition" made by the company during the next three years.

Training

Rashtriya Raksha University (RRU) signed a MoU, in July 2022, with a private drone service provider and training organisation, to set up a 'Remote Pilot Training Centre' (RPTC) to teach drone flying to defence/security forces personnel as well as citizens on a private partnership model near Gandhinagar. The RPTC will have DGCA certified drone trainers teaching the trainees regarding quadcopters with strict adherence to certification necessities.



UNMANNED AERIAL SYSTEMS INDIA 2023 PROGRAMME, MONDAY 28 AUG 2023



MONDAY 28 AUGUST 2023

SESSION 1 - INAUGURAL SESSION (0930-1045 hrs)

Welcome Address. Lt Gen Sunil Srivastava, AVSM, VSM**, (Retd), Director CENJOWS

Inaugural Address. Admiral R. Hari Kumar PVSM, AVSM, VSM, ADC, Chief of the Naval Staff.

Keynote Address. Lt Gen Ajai Kumar Suri, Director General Army Aviation.

Special Address. Air Vice Mshl PV Shivanand, VM, ACAS Ops (Air Defence) Air HQ

Industry Perspective. Col KV Kuber, Director Defence & Aerospace, E&Y.

Release of EY-IMR Knowledge Paper on Unmanned Aerial Vehicles.

1030 - 1100 hrs Refreshments and Exhibition.

SESSION 2 - UAV REQUIREMENTS (1100 – 1220 hrs)

Chairman: Air Vice Mshl George Thomas, AVSM, VM, ACAS (Plans), Air HQ.

1100 - 1110 hrs Introduction of panelists and Chairman's Opening Remarks

1110 - 1120 hrs IAF's UAV plans. **Gp Capt NK Chaubey,** Gp Capt Ops (NBC & RPA), Air HQ.

1120 - 1130 hrs Army's HALE UAV Requirements. Col Jasbir Singh Maan, Col Aviation-10 (RPAs), Army Avn Dte

1130 - 1140 hrs Army's Tactical UAV Requirements. Col NR Choudhury, Col Inf-5, Infantry Dte, Army HQ.

1140 - 1150 hrs Army's Requirements of Runway-indep RPAs. Brig Manish Pande, Brig Ops, Arty Dte, Army HQ.

1150 - 1200 hrs Navy's experience with Drones and Future Plans. Cdr Hemant Shekhar, Cdr (AW)-RPA, Naval HQ

1200 - 1220 hrs Discussion/ Questions & Answers.

SESSION 3 - INDUSTRY'S POTENTIAL AND CAPABILITIES (1230 - 1340 hrs)

Chairman: Rear Adm (Prof) Deepak Bansal, VSM, Retd, Dept of Mechanical Engg, IIT-Madras

1230 - 1240 hrs Introduction to panelists and Chairman's Opening Remarks.

1240 - 1255 hrs Special Address. Smit Shah, President, Drone Federation of India.

1255 - 1310 hrs Make in India in Military UAS. **Swapnil Jalundhwala**, Adani Defence & Aerospace.

1310 - 1325 hrs Orbit Full communication suite for UAVs. Ran Weinstein, VP Sales & Mktg, Orbit

Communication Systems.

1325 - 1340 hrs Discussion/ Q&A

1340 - 1430 hrs Lunch & Exhibition.

SESSION 4 - INNOVATIONS AND RESEARCH & DEVELOPMENT (1430 – 1600 hrs)

Chairman: Cmde (Dr) AP Golaya, VSM, OIC Tech Devp Acceleration Cell, NIIO, Naval HQ

1430 - 1440 hrs Introduction of panelists and Chairman's Opening Remarks

1440 - 1450 hrs Developments in the civil applications of drones. **Gp Capt (Dr) RK Narang, VM**, MP-IDSA.

1450 - 1505 hrs Latest developments in UAVs. Dr S Rajagopal, Scientist G, ADE, DRDO.

1505 - 1515 hrs Swarm Drones. **Col Amit Kumar**, Col Arty & Avn, Army Design Bureau.

1515 - 1525 hrs Meher Baba Swarm Drone Competition. Air Cmde SM Paranipe, VM, Project AD SIG, Air HQ.

1525 - 1550 hrs Discussion/ Questions & Answers.

SESSION 5 - COUNTER-UAVS (1600 - 1705 hrs)

Chairman: Air Vice Mshl Rajiva Ranjan, VM, ACAS Ops (Space), Air HQ

1600 - 1610 hrs Introduction of panelists and Chairman's Opening Remarks

1610 - 1620 hrs Countering the UAV Threat. Col Rakesh Zutshi, Col AD (Ops & Op Lgs), Army Air Defence Dte

1620 - 1635 hrs D-4 anti-drone system. Sh V Kishore Kumar, Scientist D, DLRL, DRDO.

1635 - 1650 hrs Discussion/ Questions & Answers.

Closing Remarks. Lt Gen Sunil Srivastava, AVSM, VSM**, (Retd), Director CENJOWS

Vote of Thanks. Maj Gen Ravi Arora, Chief Editor, Indian Military Review.

1705 hrs Refreshments and dispersal.

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

Transferable and refundable if cancelled 48 hrs before the event.

ECO EXHIBITION BOOTH

LOW COST FEATURE RICH

Rs 118,000

- 1. One furnished octonorm exhibition booth 2X2M.
- 2. Company profile 75 words with Logo, contact details in event guide.
 - 3. Half page advt in show guide
 - 4. Four 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
 - 7. Banner on IMR website

ADDITIONAL BRANDING OPPORTUNITIES

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

Rs 10,000

Rs 118,400 Rs 10,000 Rs 25,000

Rs 118,000

25.000

PREMIUM BOOTH

FOR MORE FOOTFALLS

Rs 236,000

- 1. One furnished octonorm exhibition booth 3X3M.
- 2. Company profile 150 words with Logo, contact details in event guide
 - 3. Full-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. Distribute up to two Company literature items in Delegate Bags
- 8. Fascia, logo, 1 table, 4 chairs, carpet, 3 lights, power box, dustbin
- Logo as Exhibitor on all print and digital marketing materials
 - 10. Banner on IMR website

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 (200 words with logo) in Event Guide
- 6. Two company literature items/gift in Delegate Bags
- 7. Delegate List with contact details
- 8. Video of speakers' presentations
- 9. Sponsor Logo on event promotion10. Logo on all marketing materials
 - 11. Banner on Event website
 - 11. Danner on Event website
 - 12. Company Logo at Venue, Lobby and on Stage as Sponsor
- 13. Fascia, logo, 2 table, 4 chairs, carpet, 3 lights, power box, dustbin at booth.
 - 14. Banner on IMR website.
 - 15. Ack as Bronze Sponsor in Chairman's address.

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) in Event Guide
- 6. Up to 3 company literature items/gift in Delegate Bags
 - 7. Delegate List with contact details
 - 8. Video of speakers' presentations
- 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.
- 14. Large banner on IMR website.
 - 15. Ack as Silver Sponsor in Chairman's address.

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. Up to 3 company literature items/gift in Delegate Bags
 - 7. Delegate List with contact details
 - 8. Video of speakers' presentations
- 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, 6 chairs, carpet, 6 lights, 2 power boxes, dustbin, 42" LED at booth.
- 14. Large banner on IMR website.
- 15. Ack as Gold Sponsor in Chairman's address.

Contact IMR Media for additional furniture, LEDs, customisatisation an Backdrop flex/ vinyl baneers

IMR Media Pvt Ltd

SPONSORSHIP PACKAGES



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Benefits	Lead Event Sponsor (1)	Platinum Sponsors (2)	Gold Sponsor	Silver Sponsor	Bronze Sponsor
Speaking slot in Inaugural Session	Yes. 15 mins				
Opportunity for Closing Remarks	Yes. 5 mins				
Acknowledgement by Event Chairman in Welcome Address	Yes	Yes	Yes		
Advt in Show Guide	Back Cover Full	Full Page	Full Page	Full-Page	Half-Page
Speaking Slot	Yes. 15 mins premium slot	Yes. 15 mins premium slot	Yes. 15 mins premium slot	Yes. 15 mins	Yes. 15 mins
Enhanced Company Profile in Show Guide	Full page plus Cover strip	700 words with logo	500 words with logo	300 words with logo	200 words with logo
Literature/gift in Delegate Bags	Unlimited	Yes. 4 items	Yes. 3 items	Yes. 3 items	Yes. 2 items
Copy of speakers' presentations	Provided	Provided	Provided	Provided	Provided
Logo on event promotion	Lead Event Sponsor	Platinum Sponsor	Gold Sponsor	Silver Sponsor	Bronze Sponsor
VIP Passes for your delegates	12	10	6	6	5
Booth Space	6x3 mtrs customised	6x3 mtrs customised	6x3 mtrs	4x3 mtrs	3x3 mtrs
Exhibition staff	6	6	6	4	3
Logo on all print and digital marketing materials	Yes	Yes. As Platinum Sponsor	Yes. As Gold Sponsor	Yes. As Silver Sponsor	Yes
Banner on Event website	Yes	Masthead banner	Yes	Yes	Yes
Logo on pole buntings on approach to venue	Yes. 10 poles, front/back	Yes. 6 poles, front/back	Yes. 4 poles, front/back		
Prominent signage with company logos outside event venue	Yes	Yes. As Platinum Sponsor	Yes. As Gold Sponsor	Yes. As Silver Sponsor	Yes. As Bronze Sponsor
Delegate list with contact details	Provided	Provided	Provided	Provided	Provided
Sponsors Banner in Thank You email to all delegates	Yes	Yes	Yes	Yes	Yes
Investment (GST 18% included)	Call IMR	Rs 767,000 (\$9,590)	Rs 590,000 (\$7,375)	Rs 472,000 (\$5,900)	Rs 354,000 (\$4,425)

UPGRADES AND ADDITIONAL BRANDING OPPORTUNITIES

In addition, Sponsors may buy the following benefits (GST 18% included)

- Delegate Folder (embossed with Company Logo) for all delegates Rs 177,000 (\$2,215)
- Delegate Lanyards (non-exclusive) with Company Logo both sides Rs 118,000 (\$1,475)
- Registration Sponsor with Company Logos at all counters
- · Luch Sponsorship with Banner
- · Refreshments Sponsorship with Banner
- Standee banner (3x6ft) at Entrance, each
- Banner (8x10ft) at Entrance, each

Rs 118,000 (\$1,475)

Rs 177,000 (\$2,215)

Rs 118,000 (\$1,475) Rs 10,000 (\$125) each Rs 25,000 (\$315) each

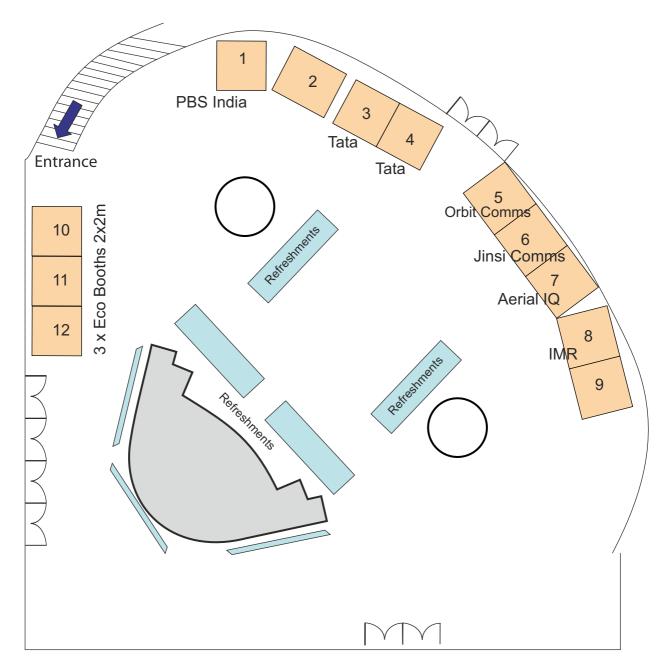




Manekshaw Centre

Delhi Cantt, India

28 Aug 2023 Floor Plan



2m x 2m Eco furnished stand

Fascia with exhibitor's name 2 delegate passes, 2 exhibition staff pass 1 Table, 2 chairs, dustbin, 1 electrical socket; 2 spotlights, carpet

3m x 3m furnished stand

Fascia with exhibitor's name 3 delegate passes, 3 exhibition staff pass 1 Tables, 4 chairs, magazine rack, dustbin 1 electrical socket; 3 spotlights, carpet+

4m x 3m furnished stand

Fascia with exhibitor's name 3 delegate passes, 3 exhibition staff passes 2 Tables, 4 chairs, 1 magazine rack, dustbin One electrical socket; 4 spotlights

6m x 3m furnished stand

Two Fascia with exhibitor's name 6 delegate passes, 3 exhibition staff passes 2 Tables, 4 chairs, 2 magazine rack, 2 dustbin 2 electrical sockets; six spotlights