



**SIAINDIA**  
An association for space industry

# DEFSAT

## CONFERENCE & EXPO

### EXECUTIVE REPORT

8-10 JANUARY 2025  
MANEKSHAW CENTRE, NEW DELHI, INDIA

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# 2025

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Executive Report

# MESSAGE FROM PRESIDENT

The DefSat 2025 Conference takes place at a pivotal juncture as India's trajectory of space and defence modernisation accelerates, with both sectors projected to grow at an impressive 14-16% CAGR. The integration of space technology into defence strategy is no longer optional but essential in today's complex geopolitical environment. The Government of India's unwavering commitment to strengthening national security is reflected in significant allocations—Rs 23,855 crore for DRDO in FY 2024-25 and Rs 25,000 crore for Defence Space Investments. These investments underscore the importance of fostering advanced space capabilities for strategic autonomy and operational preparedness. This year holds particular importance with the Ministry of Defence declaring 2025 as the "Year of Reforms," highlighting a comprehensive vision for the modernisation of our armed forces, cyber-space integration, and joint operational effectiveness. These forward-looking reforms resonate with DefSat's core mission to explore and adopt innovative space technologies that secure and advance India's strategic interests.

Dr. Subba Rao Pavuluri



**India's unwavering  
commitment**



Rs 23,855 crore for DRDO in FY 2024-25 and Rs 25,000 crore for Defence Space Investments.

## Executive Report

# MESSAGE FROM LT GEN PJS PANNU (RETD)

DefSat has emerged as a crucial platform, bringing together thought leaders, innovators, and defence strategists to address the evolving dynamics of space and its role in national security. As space evolves into an increasingly contested domain, the challenges of managing this high ground of strategic importance have never been more pronounced.

At the heart of modern space conflict lies the OODA loop—Observe, Orient, Decide, Act. This decision-making cycle honed through cutting-edge AI-driven technologies, enables swift responses in an environment where adversaries would constantly seek to disrupt, deny, degrade, and destroy our space capabilities. While, space wars are an extension of terrestrial wars, however, its impact is hugely political. Therefore decision making at all levels will have to be extremely calibrated. The advent of Mosaic Warfare and the integration of AI into decision-making processes are reshaping the battlefield, enabling us to create resilient, distributed, and adaptive strategies to counter ever-evolving threats.

The new era of non-kinetic warfare is no longer confined to military forces alone. It is a shared responsibility among industries, government, and academia to drive innovation in the defence sector. Non-kinetic capabilities, whether in the form of cyber attacks, electronic warfare, or AI-powered decision systems, require seamless collaboration and a commitment to ensuring our space and cyber domains remain secure.



Our ability to navigate the complex space battlespace, leveraging ISR capabilities and advanced AI algorithms, will determine the future of defence strategy. The IndSpaceWarGame initiative exemplifies the importance of integrating space-related scenarios into national defence simulations, ensuring our defence forces are equipped with the tools, strategies, and expertise to respond to emerging threats.

As we look to the future of DefSat, it is clear that the next generation of defence strategies will be defined by technological innovation, cross-sector collaboration, and our ability to adapt to the shifting nature of warfare. The solutions we explore today will set the course for space defence capabilities tomorrow, ensuring India's position at the forefront of global space and defence leadership. Finally, those who control the space would control the ground.

Lt Gen (Dr) PJS Pannu PVSM, AVSM, VSM (Retd),  
Senior Advisor, SIA-India



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Executive Report

# DEFSAT 2025: A RESOUNDING SUCCESS FOR THE THIRD CONSECUTIVE YEAR

## INTRODUCTION



SIA-India successfully hosted the 3rd edition of the DefSat Conference and Expo 2025 from January 8th to 10th at the Manekshaw Centre, New Delhi, with the theme "*Integrated Space Capabilities for Multi-Domain Operations.*" The event attracted over 500 delegates from 150+ organizations, including government officials, military leaders, industry professionals, and academics, exploring space technologies' role in national security. With participation from 20 nations, DefSat 2025 solidified its standing as a global platform advancing defence space capabilities.

The conference featured over 80 distinguished speakers across 17 thematic sessions and technical sessions, supporting in-depth discussions on critical defence and space topics. SIA-India, in its relentless pursuit of advancing space cybersecurity, forged a critical alliance with the Data Security Council of India (DSCI). The collaboration is poised to enable secure digital transformation, attract investments, and expand market opportunities.

DefSat 2025 was supported by eight key government organisations, including NSIL, DRDO, MoD, MeitY, and several other prominent institutions, reflecting a strong commitment to advancing India's defence and space sectors. The event also featured 16 exhibitors, showcasing cutting-edge innovations and attracting significant media coverage in news outlets. These exhibitors presented expanding capabilities and demonstrated how space is critical in meeting the defence needs.

Executive Report

# DEFSAT 2025: A RESOUNDING SUCCESS FOR THE THIRD CONSECUTIVE YEAR

A major highlight was the IndSpace Wargame 3.0, an interactive exercise that simulated real-world space security scenarios, focusing on the 4 Ds (Disrupt, Deny, Degrade, Destroy) and information warfare tactics. This engaging exercise underscored the complexities of space security operations.

For the first time, DefSat 2025 highlights the convergence of space technology and homeland security, paving the way for a safer and interconnected future.

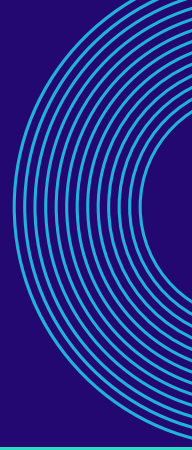
In addition, DefSat 2025 hosted thematic sessions on Homeland Security, Military-Grade Standards, Non-Kinetic Space Warfare, and the Cyber Shield for Space. Discussions on Venture Funding and Investment emphasised opportunities for innovation in the defence sector, particularly through AI-enabled systems that enhance decision-making processes.



SIA-India also announced its partnership with the Government of Uttarakhand to bridge policy, R&D, and private investment, fostering a sustainable ecosystem for space and defence collaboration.

DefSat 2025 stands as a testament to India's commitment to advancing space and defence capabilities. Looking ahead, the event's momentum will continue to unlock new opportunities, positioning India as a key player in the global defence landscape.

# DefSat '25 : An Unstoppable Success



500+

Participants

150+

Organisations

20

Nations

13

Thematic Sessions

4

Reports

4

Technical  
Sessions

80+ Distinguished Speakers

16

Exhibitors

200+

Features in News Outlets  
and Publications

## Executive Report

# Message from our leaders



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"As we step into the 25th year of our evolution, we stand at the crossroads of transformation and modernization. Space is not just the frontier but the ace that will set the pace for the future, integrating technology, innovation, and security to build a prosperous and resilient India. Let us harness the power of collaboration, embrace the spirit of self-reliance, and inspire every soul to dream beyond boundaries."

Lt Gen Gurmit Singh (Retd)  
PVSM, UYSM, AVSM, VSM  
Hon'ble Governor of Uttarakhand



“

"Satellite communications are critical pillars that form the backbone of the defence industry. To give you a sense of scale, the global satellite communications market for defence is expected to grow to \$7.76 billion by 2029. Closer to home, India's satellite communication market is projected to nearly double to \$6.81 billion by 2030. The future of defence lies not only in technology but in the ability to adapt."

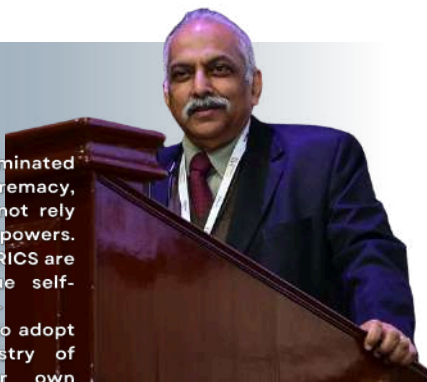
Dr Subba Rao Pavuluri  
President, SIA-India



“

In a turbulent world dominated by Western supremacy, countries like India cannot rely on the mercy of global powers. Initiatives like G20 and BRICS are steps forward, but true self-reliance—Atmanirbharta—requires every ministry to adopt it, not just the Ministry of Defence. Building our own strength is the only path to becoming a global power.

Lt Gen Vinod G. Khandare, PVSM, AVSM, SM  
Principal Adviser, MoD



“

There are two critical dimensions of space warfare: 'Space for Defence' and 'Defence of Space.' Space-based capabilities like ISR, PNT, and communication are integral to modern military operations, while robust Space Situational Awareness is essential to safeguard assets and maintain operational superiority. Space is both an enabler of terrestrial operations and a contested domain requiring vigilant defence.

AVM Pawan Kumar, Director General, DSA



Executive Report

# Key Highlights

## Day 01

The inaugural day of DefSat 2025 brought forth critical discussions on the transformative impact of emerging technologies on multi-domain operations and defence strategies.

Key sessions included:

- **AI-Enabled Mosaic Warfare:** Explored the integration of AI, machine learning, and predictive analytics in transforming multi-domain operations, emphasising their role in strategy and decision-making.
- **Foundational Technologies for Defence Space Resilience:** Highlighted the backbone technologies enabling modern defence systems, focusing on quantum communication, inter-satellite links, and battlefield communication advancements.
- **Maritime Domain Awareness (MDA):** Charted the critical role of space-based assets in enhancing maritime domain awareness within the Indian Ocean Region (IOR), spanning at least 1,500 km from the Gulf of Aden to the Straits of Malacca. Sessions focused on satellite-powered ISR, C4ISR networks, and countering anti-access/area denial strategies to bolster maritime security.



The day saw the signing of an important MoU between DSCI and SIA-India, aimed at boosting satellite communication, strengthening cybersecurity, and building essential skills. Reflecting on the occasion, Mr. Vinayak Godse, CEO of DSCI, shared:

*“India has set global benchmarks in democratizing digital transactions. It is time to extend this to cybersecurity. With private players entering the fray, India is positioned to become a global hub for secure digital ecosystems.”*

Additionally, the Space Economy Handbook by SI-India and Gateway Consulting was launched, offering a comprehensive guide to India’s space sector, detailing regulatory frameworks, commercial opportunities, and private sector authorizations.

A recurring theme was the call for unified military standards tailored to the defence space industry. Experts proposed a cohesive framework to harmonise existing fragmented standards, inspired by DRDO’s advancements in military communication.

Discussions also framed space as a contested warfighting domain, underscoring the importance of mastering the OODA loop (Observe, Orient, Decide, Act) for strategic dominance. Proactive battlefield management systems and resilient strategies were deemed critical as militarization increasingly intersects with space exploration.

The inaugural day set the stage for meaningful collaborations and transformative discussions, paving the way for a robust and resilient defence ecosystem.



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# SIA-INDIA SIGNS MOU WITH DATA SECURITY COUNCIL INDIA (DSCI)



The conference witnessed the exchange of an MoU between Data Security Council of India (DSCI) and SIA-India, aimed at:

- Strengthening satellite communications
- Advancing specialized skill-building
- Promoting cybersecurity in the Indian space industry
- Conducting market research and fostering collaborations

According to the DSCI's India Cyber Threat Report 2025, a cumulative of 369.01 million malware has been detected in 2023-24, emphasizing that protecting satellites from cyber threats is non-negotiable. The DSCI-SIA collaboration ensures that India's strategic space infrastructure is secure and optimised for economic and societal benefits, positioning the nation as a global leader in the space economy.



Executive Report

# Report Release



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Executive Report

# Key Highlights

## Day 02



The second day of DefSAT 2025 commenced with the inaugural session graced by distinguished dignitaries, including Lt Gen Gurmit Singh (Retd), the Hon'ble Governor of Uttarakhand. The Hon'ble Governor emphasised that the future of defence lies not only in technological advancements but also in the ability to adapt to emerging challenges. Highlighting the critical role of satellite communications as the backbone of the defence industry, he underscored their importance in ensuring strategic superiority, highlighting the Aryabhata Institute of Nainital as the centre for strategic activities. Ahead of this, SIA-India announced the Government of Uttarakhand as the State Partner to strengthen space excellence through collaborative initiatives.

Among the various critical discussions, a notable highlight was the inclusion of homeland security for the first time in the DefSAT Agenda under defence space architecture. The discussion focused on the applications of space technologies in areas such as border surveillance, disaster response, and law enforcement, with advanced satellite imagery, airport screening solutions, and drone countermeasures identified as key enablers.

The panel discussion on 'Secure Satcom: Enhancing Military Communications' highlighted advancements in COMSEC, TRANSEC, encryption technologies such as Quantum Key Distribution and Post-Quantum Encryption, and new waveforms. These discussions come at a time when India's satellite communications market is projected to nearly double to \$6.81 billion by

2030. Complementing this vision was the tech brief by Ananth Technologies, India's first private GSO satellite operator, showcasing their role in ensuring last-mile connectivity.

The tech brief was part of SIA-India's pioneering efforts to provide a platform for industry leaders to demonstrate their technological prowess that brought together industry stalwarts like Planet, Safran, C2C Advanced, and Ananth Technologies.

Discussions further emphasised both offensive and defensive tactics, including topics such as Cyber Shield for Space: Integrating Space and Cyber, securing critical infrastructure, and addressing the growing need for Non-Kinetic Space Warfare: Securing National Space Capabilities. These conversations reflected a powerful emerging thought: "It's not technical brilliance that India lacks, but the lack of support to imagination that drives technology forward." Supporting this imagination, the next session focused on Defence Space Innovation: Venture Funding and Investment Opportunities, providing intellectual momentum to fuel the future of India's defence space ecosystem.

The release of the India Space Congress 2024 Report marked a significant leap in understanding the evolving landscape of India's space industry.



Executive Report

# Report Release

**REPORT RELEASE**  
TITLE  
**INDIA SPACE CONGRESS 2024  
CONFERENCE REPORT**  
DOWNLOAD REPORT : <http://www.sia-india.com/category/reports-publications/>

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-Bridging Boundaries, Transforming Tomorrow  
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## Executive Report

# Key Highlights

## Day 03



food security, and connectivity. This collaboration gained further momentum with the recently signed MoU between SIA-India and the Ghana Space Science and Technology Institute (GSSTI).

A key highlight of the day was the IndSpaceX 3.0 tabletop exercise, simulating a strategic contest between “Green Land” and “Orange Land” for space dominance. This wargame addressed operational scenarios, including warfare tactics, resilience-building, and Space Situational Awareness (SSA), to counter emerging threats in the space domain. Complementing these developments were discussions on India’s ambitious goal to deploy 100 military satellites by 2030 and the ₹25,000 crore allocation for defence space investments in FY 2024-25. Advancements such as miniaturised laser communication systems, heterogeneous satellite swarms, and space-grade E-band payloads were highlighted as critical to strengthening communication, surveillance, and space-based early warning systems in an era of rising threats from hypersonic weapons and counter-space technologies.

The day commenced with the release of two landmark reports, PRISM 1.0: US-India Export Controls Dialogue and India-Africa Space Collaboration: Unlocking Strategic Opportunities for Growth. These reports exemplify the synergy between innovation and policy alignment, unlocking new avenues for sustainable growth and technological leadership. The PRISM Report explores the evolving landscape of export controls between India and the United States while examining regulatory frameworks and their implications for collaborative B2B ventures. The future webinars will focus on strategic markets like Australia, Japan, and Germany. The Report on India-Africa comes as a testament to SIA-India's commitment to highlighting India's advancements in space technology and Africa's growing ambitions, the report underscores how collaborative efforts in satellite technology, Earth observation, and capacity building can address global challenges like climate change,

The day’s discourse highlighted the importance of adopting multilayered approaches and heterogeneous satellite swarms to stay competitive in an era of rapid technological evolution. These innovations, combined with robust international partnerships, are paving the way for a more resilient and secure space environment. DefSat 2025, through its comprehensive approach to policy, innovation, and collaboration, affirmed India’s trajectory as a global leader in defence and space technology.



Executive Report

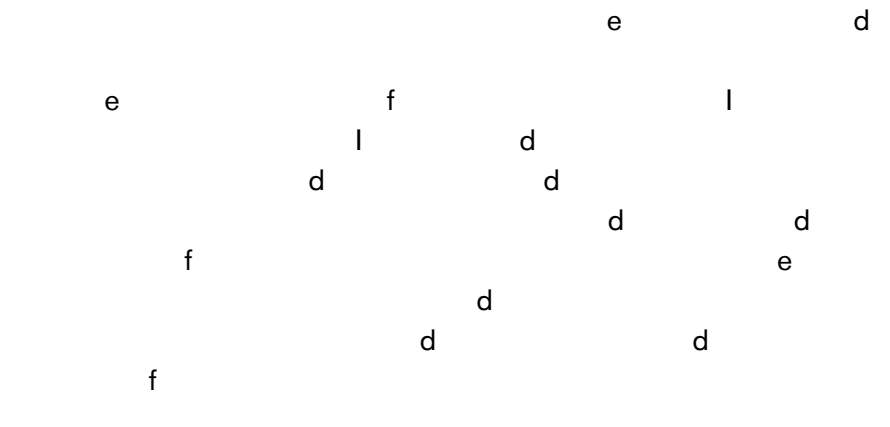
# Report Release



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p E i Q C

Executive Report

# Report Release



Executive Report

# Strategic and Transformative Exhibition



Organised By

Knowledge Partner

Supporting Organisations



# DEFSAT CONFERENCE & EXPO

THE ASHOKA HALL, MANEKSHAW CENTRE, NEW DELHI | 08 - 10 JAN 2025

DEFSAT an annual flagship event hosted by SIA-India, is a strategic assemblage of thought leadership offering to exploit the potential of disruptive space technology to enhance defence capabilities.


## DAY 1 – 8 JAN 2025


0900 – 0930  REGISTRATION

0930 – 1130  GIO1 | INAUGURAL SESSION

**Welcome Address:** Dr. Subba Rao Pavuluri, President SIA-India **Defence Space Address:** Lt. Gen (Dr) PJS Pannu PVSM, AVSM, VSM (Retd), PhD, Senior Advisor, SIA-India **Keynote Address:** Leveraging Space for Strategic Defence – Opportunities for Industry Partnerships Defence Space – Mr. Gautam Sharma, Managing Director, Viasat India **Special Address:** Mr. Vinayak Godse, CEO, Data Security Council India **Special Address:** AVM Pawan Kumar, DG, DSA **Vote of Thanks:** Shri Anil Prakash, Director General, SIA-India

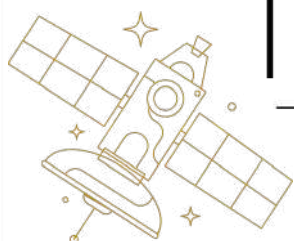
**EXHIBITION OPEN & NETWORKING TEA**

1130 – 1215 

1215 – 1315 

### GIO2 | AI-Enabled Mosaic Warfare: Transforming Multi-Domain Operations for Next-Gen Defence Space

This session convenes experts to examine the integration of advanced technologies in Mosaic Warfare and Multi-Domain Operations (MDO) empowered by Space Technologies. Focusing on Artificial Intelligence (AI), machine learning, predictive analytics, and autonomous systems, the panel will explore how these innovations are reshaping defence strategies. Discussions will highlight real-time, data-driven decision-making across land, maritime, air, space, and cyberspace to achieve decision superiority and operational agility.



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1215 - 1315



The session will address implications for force design and command and control (C2) processes in contested environments.

**Chair and Moderator:** Lt. Gen (Dr) PJS Pannu PVSM, AVSM, VSM (Retd), PhD, Senior Advisor, SIA-India

**Panellists:**

Cmdr S K Pujari, Chief Technology Advisor, C2C Advanced Systems

Dr Shubhashisa Sahoo, Scientist-F, CAIR, DRDO

Mr Sai Krishna, CEO, Saptang Labs

Col. Rajneesh Ralli (Retd), VP-Growth Operations, Dhruva Space

Maj Gen Rakesh Pandey, Corps of Signals

1315 - 1415



## NETWORKING LUNCH

1415 - 1515



## GI03 | Pillars of Strength: Foundational Technologies for Defence Space Resilience

This discussion will delve into the foundational space-based technologies that form the backbone of modern defence systems, driving innovation, operational superiority, and security. **Chair and Moderator:** Mr. Sudheer N Kumar, Former Director, CBPO, ISRO HQ **Panellists:** Cdr KG Sarup Kumar (retd), Head Program Management, Agnikul Cosmos Mr SakthiKumar R, Founder and CEO, OrbitAID Aerospace Mr. Vikas Arora, VP-Business Development, Logic Fruit Technologies Dr Ashok Saxena, CEO, Space-TS Mr Suhas Gopinath, CEO and Chairman, Globals Inc

1515 - 1530



## Tech Brief - Space Situational Awareness

Mr. Noel Ballot, EVP Sales & Marketing, Safran

1530 - 1630



## GI04 | Understanding Military-Grade Standards: Certifications Processes for India's Defence Space Sector

This panel discussion will bring together military leaders, certification agencies, and industry experts to clarify 'military-grade' standards in India's defence and space sectors. Representatives from DGQA, CEMILAC, and defence PSUs will outline the qualification processes for defence technologies, including the criteria and testing protocols necessary to meet military specifications. The session will emphasise the role of certifying agencies in ensuring compliance with Joint Services Specifications (JSS) and discuss how industry can align products with user requirements.



**Chair and Moderator:** Lt. Gen RS Reen, Former Director General Quality Assurance (DGQA)

**Panellists:**

Ms J S Manjula, Additional General Manager, LCA-EW&A, BEL

Mr. L C Mangal, Director, DEAL, DRDO

Colonel Surender Kumar Rohilla, Standard Development Authority, DPP, Ministry of Defence

Ms M Neelavathy, Outstanding Scientist Deputy Director, Communications, Navigation, and Power Systems Area

Mr. Vinod S Chippalkatti, President SEBU, Centum

1630 - 1700



## Networking Tea Break

1700 - 1800



## GI05 | Securing Turbulent Waters: Space-Powered Maritime Strategies

This session examines the pivotal role of space-based assets in enhancing maritime domain awareness (MDA) and naval operations. Expert panellists will discuss how advanced satellite technologies are revolutionizing blue-water capabilities and extending the operational reach of naval forces. Key topics include the use of space-based ISR (Intelligence, Surveillance, Reconnaissance) for persistent maritime surveillance, over-the-horizon targeting, and the optimization of naval C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance) networks. The discussion will also address how these capabilities support anti-access/area denial (A2/AD) strategies and improve maritime security in contested environments.

**Chair and Moderator:** Vice Adm Shekhar Sinha, PVSM, AVSM, NM, & Bar ADC (Retd.)

**Panellists:**

Comde (Retd.) A J Singh, Vice President, Indian Maritime Foundation

Mr. Vinay Simha, Founder and CEO, SkySERVE.AI

Mr Satish Raju Gottumukkala, Senior Manager Industry Accounts, APAC, Planet

Mr Srinath Logasubramanian, VP - Sales, ReOrbit

Mr Pramod Konugurthi, Sr VP, Space and Data Engineering, XDLINX Labs

1800 - 1815



## Valedictory Address

Shri R Shakya, Addl DG, Haryana LSA, Department of Telecommunications, Government of India

1815 - 1820



## Closing Remarks

Mr Pawan Kapur, Board Member, SIA-India

**End of Day - 1**

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## DAY 2 – 9 JAN 2025

0900 – 0930  REGISTRATION

0930 – 1030  GIO6 | INAUGURAL SESSION

**Welcome Address:** Dr. Subba Rao Pavuluri, President, SIA-India

**Defence Space Address:** Lt. Gen (Dr) PJS Pannu PVSM, AVSM, VSM (Retd), PhD, Senior Advisor, SIA-India

**Special Address:** Air Vice Marshal Rahul Bhasin, Assistant Chief of Air Staff Operations (Space)

**Special Address:** Lt. Gen Manjinder Singh, AVSM, YSM, VSM, General Officer Commanding-in-Chief South Western Command

**Inaugural Address by the Chief Guest:** Lt. Gen. (Retd.) Gurmit Singh, PVSM, UYSM, AVSM, VSM, Hon'ble Governor of Uttarakhand

**Vote of Thanks:** Shri Anil Prakash, Director General, SIA India

1030 – 1100  Exhibition & Networking Tea Break

1100 – 1200  GIO7| Secure Satcom: Enhancing Military Comms

This session explores advanced satellite communications for secure beyond line-of-sight military operations. Panellists, including military leaders and satellite service providers, will discuss innovations in COMSEC, TRANSEC, encryption technologies, and new waveforms. Key topics include quantum key distribution (QKD), post-quantum encryption (PQE), and industry capabilities for reliable communications in contested environments. The session will also explore spectrum issues. Insights on global coverage and integration with defence platforms will highlight the role of satellite services in enhancing military communication resilience and effectiveness.

**Chair and Moderator:** Vice Admiral Pradeep Chauhan, AVSM & Bar, VSM, DG, NMF

**Panellists:**

Brig(Dr) Navjot Singh Bedi, Additional Officer, DIA

Mr. Jeewan Singh, Account Director, Viasat India

Mr Vinod Kaul, RVP – Asia (South/South East), Gilat Satellite Networks

Ms Richa Hukumchand, Founder, Pramatra



1200 – 1300



## GI08 | Harnessing Space Technologies for Comprehensive Homeland Security

This panel examines the pivotal role of space-based technologies in enhancing homeland security and disaster response capabilities.

Representatives from Central Armed Police Forces, Coast Guard, NDMA, and State Police Forces will join industry leaders to discuss how satellite communications, Earth observation, and positioning systems are revolutionizing operations across strategic, operational, and tactical levels.

The session will explore innovative applications in border security, counter-insurgency, disaster management, and law enforcement, highlighting how space assets improve situational awareness, decision-making, and operational effectiveness across India's diverse and challenging environments.

**Moderator:** Mr. Sanjay Kundu, Former DGP Himachal Pradesh

**Panellists:**

Mr. Rajeev K Sharma, DG, BPR&D

Mr. Praveer Ranjan, Special DG, CISF

Mr Gulpawan Singh, President, IIRIS

Mr Advait Kulkarni, Director, Vasundharaa Geo Technologies Pvt Ltd

1300 – 1400



## NETWORKING LUNCH

1400 – 1500



## GI09 | Defence Space Innovation: Venture Funding and Investment Opportunities

This session explores the diverse funding and investment opportunities in India's defence sector. Industry experts, financial institutions, government representatives, and defence technology companies will discuss various mechanisms supporting innovation in national security. Topics include government initiatives, bank financing, venture capital, and public-private partnerships. Stakeholders from startups, MSMEs, and established players will gain insights into accessing capital, navigating funding challenges, and leveraging strategic investments to drive indigenous defence technology growth. The panel will highlight how these funding sources are shaping India's defence capabilities and fostering a robust innovation ecosystem. Chair and Moderator: Lt. Gen Vinod G. Khandare, PVSM, AVSM, SM, Principal Adviser, MoD  
Panellists: Ms N Ranjana, Director – DSTA, DRDO Mr Amey Belorkar, Senior Vice President, IDBI Mr Raj Sethia, Managing Partner, MGF-Kavachh Mr Rajesh Doshi, Managing Director, Steer Advisors Mr Ayush Bagga, North India Head, T-Hub Ms Kirti Upadhyaya, Founder, IndUS Tech Council



1500 – 1515



### Tech Brief – Gaining the Advantage: Satellite Data for Informed Defence Decisions

Ms. Ericka Matsuda Martin, Sales Engineer, Asia Pacific Region, Planet

1515 – 1520



### Brief – Mr Prakash Mirani, CEO, GeM

1520 – 1535



### Tech Brief – Space-Enabled Defence : Ananth's Indigenous Satellite Solution

Dr. Alok Shrivastava, Director, Ananth Technologies

1535 – 1635



## GI10 | Space-Enabled Land Warfare: Enhancing Army Operations

This session delves into the critical role of space technology as a force multiplier for land operations in modern warfare. Participants will explore advanced space-based applications that enhance army capabilities, including satellite-driven intelligence, high-precision geolocation navigation and targeting, and secure communications frameworks. The discussion will also cover real-time data relay systems that support situational awareness and decision-making on the battlefield. By integrating these space capabilities, land forces can achieve greater operational effectiveness and maintain a strategic edge in complex combat environments.

**Chair and Moderator:** Lt. Gen Dushyant Singh, DG, CLAWS

**Panellists:**

Maj Gen (Dr) Sandeep Sharma, VSM, PhD, former Scientist H NTRO

Col Harinderjit Singh, Director Imagery Analysis & Geospatial Intelligence , DIPAC

Brig G Manoj, Defence Space Agency

Wg Cdr PRL Prakash, Vice President, Avantel Limited

Lt Col (Retd) Christopher McIntosh, CEO, Methera Global

1635 – 1700



## Network Tea Break

1700 – 1730



## GI11 | Non-Kinetic Space Warfare: Securing National Space Capabilities

This session will focus on the significance of non-kinetic warfare in securing national strategic space capabilities. Military practitioners will discuss various methods to enhance resilience against threats in the space domain, including electronic warfare, signal jamming, and anti-spoofing tactics. The discussion will also cover advanced technologies like directed energy systems and AI-driven threat detection that bolster operational security.



Participants will gain insights into developing comprehensive frameworks for safeguarding national interests in space while addressing the evolving challenges posed by adversaries in this critical domain.

**Chair and Moderator:** Lt. Gen Karanbir Brar, GOC – Dakshin

**Panellists:**

Lt. Gen. RS Raman, Director General of Military Intelligence

Lt Col V Shanmuga Velan, CTO, Elena Geo Systems

Dr Srinivas Sastry, Former Director, DSP, DRDO

1730 – 1800



## GI12 | Cyber Shield for Space: Integrating Space and Cyber

This session will explore the critical intersection of space and cybersecurity in enhancing operational resilience and situational awareness for defence applications. Military practitioners and industry leaders will discuss advanced cyber technologies and risk management strategies, addressing the principles of zero trust and secure design. The session aims to foster collaboration that drives innovation and strengthens national security in an interconnected landscape. Attendees will gain insights into best practices and cutting-edge solutions to enhance defence capabilities against evolving threats. **Chair:** Lt General MU Nair, PVSM, AVSM, SM, (Retd) National Cyber Security Coordinator, National Cyber Coordination Centre (NCCC) **Panellists:** Maj Gen P K Mallick, VSM(Retd), Sr Directing Staff (Army), National Defence College AVM (Dr) Devesh Vatsa, Advisor, Data Security Council India Mr Rajshekhar Pullabhatla, Director, ISAC

1800 – 1815



## Valedictory Address

Dr PV Radhadevi, Director, ADRIN – ISRO

1815 – 1820



## Closing Remarks

Dr D S Govindrajan, Board Member, SIA-India

End of Day – 2



## DAY 3 – 10 JAN 2025

0900 – 0930



### REGISTRATION

0930 – 1030



### GI13 | INAUGURAL SESSION

**Welcome Address:** Dr Subba Rao Pavuluri, President SIA-India

**Special Address:** Lt. Gen (Retd) Vinod G Khandare, PVSM, AVSM, SM, Principal Advisor to MOD

**Vote of Thanks:** Shri Anil Prakash, Director General, SIA-India

1030 – 1100



### Exhibition & Networking Tea Break

1100 – 1200



### GI14 | Harnessing Space Capabilities for Aerospace & Precision Strike Missions

This session will examine the integration of space capabilities with aerial operations, highlighting how air forces utilise satellite communications, reconnaissance, precision targeting, and navigation systems to optimise various platforms, including drones, UAVs, hypersonic missiles, and High-Altitude Pseudo-Satellites (HAPS). Panellists, including experienced Air Force experts and industry leaders, will discuss the synergy between aerospace and space technologies and their impact on modern air combat. Participants will gain insights into how space assets support mission planning and situational awareness while addressing challenges in integrating these capabilities to strengthen defence infrastructure and maintain air superiority in contested environments. **Chair and Moderator:** Air Marshal Anil Chopra PVSM, AVSM, VM, VSM, (Retd), Former DG, CAPS Panellists: AVM Rajiva Ranjan, VM, ACIDS-ICT, IDS HQ, (Retd.) Gp Capt (Retd) Arvind Pandey, Visiting Fellow, CAPS Air Marshal Sanjeev Kapoor AVSM, VM (Retd.), Former Director General (I&S) Air Force Mr Noel Ballot, Executive Vice President, Safran Ms Sree Supranayi, Co-Founder and CEO, AnduraX Pvt. Ltd



1200 – 1215



### Tech Brief – Futuristic C4ISR Systems : An Architectural Framework Driven Approach

Mr Krishna Chandra, Chief Mentor, C2C Advance Systems  
Cdr K Ramesh (Retd.), Chief Technology Officer, C2C Advanced Systems

1215 – 1315



### GI15 | Advancing Sensor Subsystems and Payloads for Space Application

This panel will explore the critical role of sensor subsystems and payloads in space applications. Industry experts will discuss innovative approaches to designing and manufacturing sensors for various space platforms, emphasizing their significance in enhancing data collection and operational capabilities. The discussion will cover advancements in sensor technologies, integration challenges, and the impact of these innovations across multiple applications, including Earth observation and defence. Participants will gain insights into how these subsystems contribute to the overall effectiveness of space missions and the importance of developing a robust domestic sensor manufacturing ecosystem in India. **Chair and Moderator:** Air Marshal G S Bedi (Retd), Former Director General (Inspection & Safety) IAF **Panellists:** Mr. Rakshit Bhatt, Co-Founder, VP - Product Development, Galaxeye Space Mr Rupesh G, CEO, XDLINX Mr Yogeshwaran J, VP of Engineering, Astrogate Labs Mr Siddhesh Naik, Founder, ULOOK Technologies

1315 – 1415



### Networking Lunch Break

1415 – 1515



### GI16 | IndSpace Wargame 3.0: Global Perspectives on Space Security Challenges

The IndSpace Wargame Exercise at DefSAT 2025 will focus on the collaborative dynamics of space security in an increasingly interconnected world. This interactive tabletop exercise will bring together defence practitioners, industry leaders, and experts from multiple nations to simulate real-world scenarios that highlight the complexities of space operations and security challenges. Participants will engage in discussions that explore how multinational partnerships can enhance collective defence strategies, address shared vulnerabilities, and develop innovative solutions to emerging threats in the space domain. By fostering collaboration across borders, the IndSpace Wargame aims to strengthen global readiness and resilience in safeguarding national interests while promoting a secure and stable space environment for all. Join us as we navigate the intricate landscape of international space security and work towards a unified approach to addressing the challenges that lie ahead.





**Chair**

Lt. Gen V G. Khandare PVSM, AVSM, SM (Retd), Principal Advisor, MoD

**Conduct & Moderation**

Lt. Gen (Dr) PJS Pannu, PVSM, AVSM, VSM (Retd), PhD, Senior Advisor, SIA-India

**Team Guides**

Lt Gen Dushyant Singh, PVSM, AVSM (Retd), DG, CLAWS  
Lt. Gen Karanbir Brar, GOC – Dakshin

**Umpire**

Dr. Ranjana Kaul, Partner, Dua Associates

**Tech Umpire**

Dr. Subrata Rakshit, Director General (TM), DRDO

The third edition of IndSpaceX 3.0 exercise will be an evaluated, two-sided simulation conducted under Multi-Domain Operations scenarios. The focus will be on identifying the space technologies and capabilities that must be developed to ensure national security.

**Think-Tanks**

Air Vice Marshal Anil Golani (Retd), DG, CAPS  
Major General (Dr) Ashok Kumar, VSM (Retd), DG, CENJOWS

1515 - 1545



**Networking Tea Break**

1545 - 1800



**Continuation of IndSpace Wargame 3.0**

**End of the Conference**



Executive Report

# MESSAGE FROM DIRECTOR GENERAL

India's space capabilities, led by ISRO, are among the best globally, and it is essential that we bring the industry and defence forces together to maximise these strengths and fulfil the nation's strategic objectives.

The third edition of DefSat 2025 marked a significant milestone in our collective journey toward forging this robust and forward-looking partnership between India's defence forces and the aerospace industry. This conference is also a reminder that business is integral to our growth, and everything works when we channel our efforts into meaningful commercial partnerships.

We deeply value the participation from our overseas partners and diplomatic representatives. India cannot thrive in isolation; we must work in global partnerships to succeed. As our nation's leaders have emphasised, we must think locally but act globally, and that mantra guides our initiatives. We are also proud of our growing global alliances, with over 50 organisations from countries like Australia, Japan, the United States, and Europe, helping us bridge gaps in the space sector. We are especially excited about our recent agreement with Ghana, launching joint initiatives in geospatial and space application development.



It is with immense pride that I announce SIA-India's first partner state, the Government of Uttarakhand, for the development of space innovation and excellence. Our seek to collaborate aims to position Uttarakhand as a hub for space-oriented development and driving partnerships between industry, defence and government for the benefit of both.

We are also proud to launch three key reports at this conference: the IndSpace Wargame Report, the DefSat Conference Report, and the DefSat Recommendations. These reports will provide critical insights for policymakers, senior defence experts, industry stakeholders, and other relevant authorities, shaping the future direction of India's space and defence landscape.

DefSat 2025 is more than just a conference; it's a call to action. As we move Wargame Report, the DefSat Conference Report, and the DefSat Recommendations. These reports will provide critical insights for policymakers, senior defence experts, industry stakeholders, and other relevant authorities, shaping the future direction of India's space and defence landscape.

Anil Prakash  
DG, SIA-India

We acknowledge and thank our

# Organising Committee



**Dr Subba Rao Pavuluri**  
President SIA & CMD  
Ananth Technologies  
Vice Chairman



**Mr DS Govindrajan**  
President Anira Space  
Member



**Lt Gen PJS Pannu (Retd)**  
Sr. Advisor, SIA-India  
Member



**Mr Sudhir Gupta**  
Former Secretary, TRAI  
Member



**Mr Rajeev Gambhir**  
Dy DG, SIA-India  
Convener



**Mr Ravi Ailawadhi**  
Entrepreneur, Regional  
Director (South Asia),  
Methera Global  
Member



**Ms Sudipta Behera**  
Director Communication,  
SIA-India  
Co-convener



**Mr Pawan Kapur**  
MD JV International  
Member



**Mr Bashir Patel**  
Sr Advisor, VIASAT  
Member



**Mr Anil Prakash**  
Director General  
SIA-India  
Member

Executive Report

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# Team SIA-India

## Behind the success of DefSAT 2025



From left to right, Ms Kaushiki Singh, Mr Krishna Pandey, Mr Anil Prakash, Mr Sudhir Gupta, Ms Sudipta Behera, Mr Pawan Kapur, Mr Ravi Ailawadhi, Dr Subba Rao Pavuluri, Mr DS Govindrajan, Lt Gen PJS Pannu (Retd), Mr Rajeev Gambhir, Ms Sakshi Shree, Ms Shivani Patil, Mr K Anbalagan, Mr Anshu Kumar.

Executive Report

# About SIA-India

As a dynamic, not-for-profit space sector association, SIA-India is dedicated to advancing sectoral interests, accelerating industry growth, and catalysing innovation through strategic engagements with key governmental and global stakeholders, policymakers, regulatory bodies, and standardization entities, aiming to create a vibrant and innovative ecosystem.



# India Space Congress 2025



4TH EDITION  
NEW DELHI, INDIA

Turning Ending into Promising Beginnings  
A Countdown to India Space Congress 2025 Begins

25 - 27 JUNE 2025



 [www.indiaspacecongress.com](http://www.indiaspacecongress.com)

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