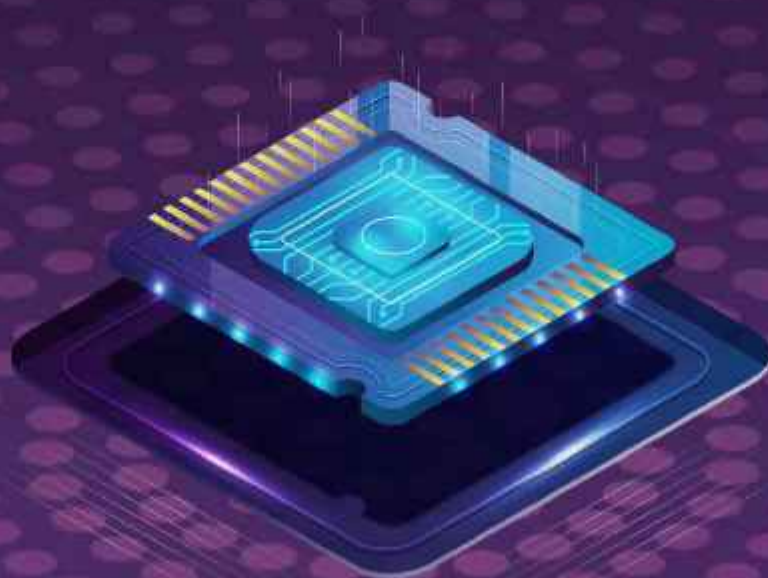


IESA VISION SUMMIT 2024

HILTON BENGALURU EMBASSY MANYATA BUSINESS PARK
(CONVENTION CENTRE)

24 **25** **January**

REPORT

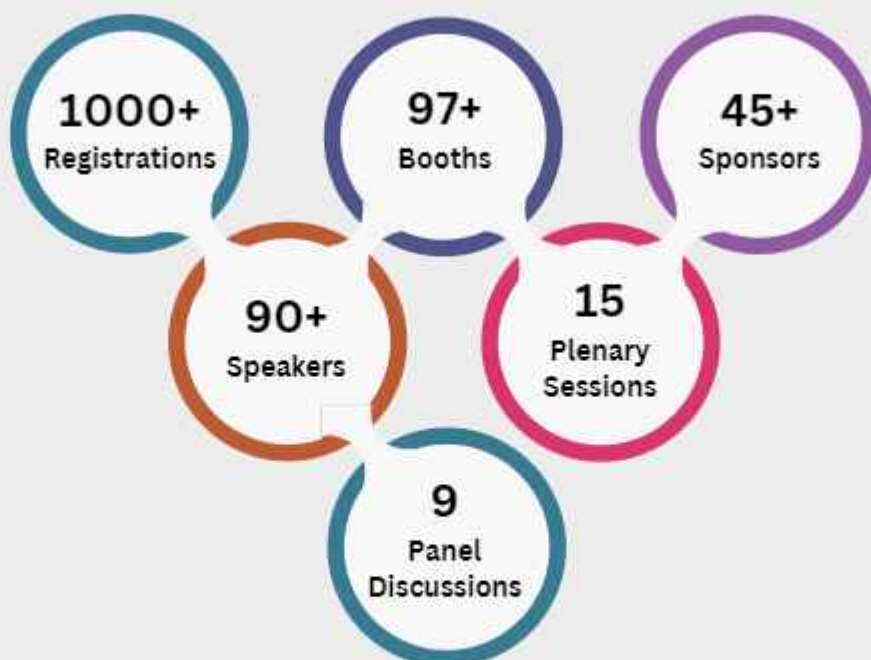


Summit Overview

The 18th edition of IESA's flagship event IESA Vision Summit 2024: India Embedded Electronics Show was conducted on 24th & 25th January in the city of Bengaluru, India. The summit witnessed a large participation from industry, government, academia, start-ups and international organisations, making it one of biggest events in the ESDM sector in India.

The theme for event this year was- "**Design Led Manufacturing Leveraging the Semiconductor Ecosystem**". India's electronics manufacturing is poised to surge to \$300 billion by 2026, transitioning from import dependence to an export-driven model while satisfying growing domestic demand. Semiconductor design and manufacturing ecosystem is the crucial catalyst for this growth, creating substantial opportunities for both local and global companies. While some Industry giants have committed investments, many companies are in advanced discussions. Government policies and the domestic design ecosystem are playing pivotal roles in expediting the roadmap, positioning India as the Electronic System Design and Manufacturing (ESDM) destination of the decade with greater value addition.

Event Highlights



24th Jan 2024: Inaugural Session



IESA Vision Summit 2024 was inaugurated by Shri S Krishnan, IAS, Secretary MeITY; Dr. Ekroop Caur, IAS Secretary IT/BT & E, Govt of Karnataka; Mr. Rangesh Raghavan, Corporate Vice President & GM, India, Lam Research; Mr. Sanjay Gupta, President, and CEO Spark Minda, Chairman, IESA; Mr. Gary Campbell, EVP, Central Engineering, Arm; Dr. V Veerappan, Vice Chairman, IESA, and Col Anurag Awasthi (R), Vice President, IESA. Following the ceremonial lamp lighting, Mr. Ashok Chandak, President of IESA, delivered the welcome address, highlighting that the event would ideate on a number of contemporary and futuristic issues relating to the semiconductor industry, feature discussions on a comprehensive range of products, trends, and innovations spanning the entire value chain in the ESDM industry, besides acknowledging the yeoman service of select industry captains.

The inaugural session was a sterling pedestal for the audience to hear views of senior government officials, thought leaders and industry leaders in India and abroad.



24th Jan 2024: Panel Discussions

Topic: Developments on the Ground: Electronics and Semiconductor Manufacturing, Semiconductor Packaging

India aims to achieve a \$300 billion electronics manufacturing sector by 2026, shifting from import-reliance to an export-driven model. The ongoing industry discussions shed light on the challenges faced by ESDM companies in the manufacturing process.

Possible Next Steps in Improving the ESDM Ecosystem:

- Prioritise skilling initiatives
- Specifying marketing segment needs
- Implement demand-driven strategies in the ESDM sector
- Emphasize process training
- Foster a product/solution mindset
- Seek government support for sustained growth
- Encourage investment across all segments of the electronics and semiconductor industry



In the photo from left to right: Dr. Andy Mackie (Principal Engineer for Advanced Materials, Indium Corporation), Mr. Amrit Manwani (MD, Sahasra Electronics), Dr. Ravi Bhatkal (MacDermid Alpha), Mr. Satendra Singh (Syрма), Mr. Deepak Chadha (CEO – Business Operations, Kaynes Technology)

Topic: AI and Recent Trends in Semiconductor Design & Manufacturing

AI is revolutionizing Semiconductor Design & Manufacturing, optimizing processes and enhancing efficiency. The panelists deliberated on how AI enhances efficiency in chip development and building processes.

Key Points to Focus:

- Leverage AI algorithms for predictive modeling to optimize chip performance.
- Invest in AI-driven data analytics for enhanced decision-making.
- Encourage long-term visions from investors and entrepreneurs.
- Collaborate with AI and semiconductor experts for innovative solutions.
- Establish AI-centric R&D labs for talent development in semiconductor AI integration.



In the photo from left to right: Mr. Vikas Dabeer (Sr. Director -Applied Materials), Mr. Hitesh Garg (Vice President and India Managing Director, NXP Semiconductors), Dr. Pradeep Ramachandran (Director of Research, KLA), Mr. Anand Muthaiah (Vice President, Tessolve Semiconductor Pvt. Ltd.), Mr. Neeraj Pai, (Engineering Manager, Analog Devices Bengaluru)

24th Jan 2024: Panel Discussions

Topic: System Solution Approach to Future Product Creations

To foster the success of end-to-end ecosystem development of semiconductor & fabless products, electronic products, manufacturing, and design service at the global level, the system solution approach must evolve to address the complexities of AI, human interfaces, machine language, and more.

Future Development Focus Areas:

- Standardization to enhance efficiency
- Adoption of a functional software ecosystem
- Emphasis on scalability across the entire ESDM sector
- Provision of basic AI and ML services as integral solutions
- Encourage startup and young minds for their input



In the photo from left to right: Dr. Ajay Joshi (CPU Architect and Fellow, ARM), Mr. Khasim Syed Mohammed (Senior Engineering Manager, Texas Instruments), Dr. Pradip Thaker (Country Head d-Matrix), Mr. Srikharth Nagaraj (Sr. Director, Renesas), Mr. Sanjeev Keshkar (CEO, Arvind Consultancy)

Topic: International Cooperation and Collaborations Towards Expanding Semiconductor Manufacturing Footprint

The International Collaboration session began with an address by Mr Mahaveer Singhvi, IFS, JS (New, Emerging and Strategic Technologies), Ministry of External Affairs who spoke about the importance of international collaborations in Technology worldwide with emphasis on India. India has built trust in the ESDM sector through its partnerships with global leaders. The discussion emphasized the synergy required among international companies, industries, and governments to elevate India on the global stage within the ESDM industry. The panelists illuminated their perspectives, collaborations, and policies aimed at strengthening India's position.

Suggested Solutions for International Cooperation and Collaboration:

- Establish dedicated platforms for knowledge exchange
- Focus on the faculty and student skill development
- Facilitate joint research and development initiatives
- Create frameworks for seamless cross-border partnerships
- Encourage reciprocal policies for mutual benefit



In the photo from left to right: Col. Anurag Awasthi (VP, IESA), Ms. Mary Thornton (Vice President Public Policy, SIA/US), Ms. Jennifer Makhecha (Chairperson Taiwan Chamber of Industry and Commerce), Mr. Toshihiro Mizutani (DG JETRO), Ms. Rupa Thakrar Bagoon (Manager (Strategic Potential Opportunity Semiconductors), Business Sweden) Ms. Arniya Mehra (Director, Digital Economy & TMT, US-India Strategic Partnership Forum)

24th Jan 2024: Speakers Gallery

Morning Session



Mr. Ashok Chondak
President, IESA



Mr. Sid Seth
CEO of Mahindra



Mr. Mohit Gupta
VP & GM, Custom Solutions @ Aggressive Semi.



Mr. Lars Reger
Chief Technology Officer, NXP Semiconductors



Mr. Hitesh Garg
Vice President and India Managing Director, NXP Semiconductors

Inaugural Session



Col. Anurog Awasthi
VP, IESA



Mr. Sanjay Gupta
President and CEO-Special Units, Chairman, IESA



Mr. Gary Campbell
DUP, Central Engineering, Arms, Guest of Honour



Shri S Krishna
IES, Secretary AWTI, Guest of Honour



Dr. Ekroop Gour
IAS, Secretary ITAT & I. Govt of Karnataka



Mr. John Neuffer
President and CEO, DLA



Mr. Rongesh Raghavan
Corporate Vice President & GM, India, IBM Research



Dr. V Veerappan
Vice Chairman, IESA

State Spotlight



Ms. Durjan Krishna
IAS, Commissioner, Department of Industries & Commerce, Govt of Karnataka



Shri Abhijeet Agrawal
IE, MD MITSIC, Govt of Madhya Pradesh



Shri Ashok Panda
Govt of Odisha

Plenary



Dr. Pradeep Ramachandran
Director of Research, IESA



Ms. Malini Narayanamaarthi
Country Head and D-Dir of Engineering Research India



Ms. Sunita Verma
Scientist G and Group Coordinator (DIO/SAGE), AWTI



Mr. Sanjeev Gupta
AGEM



Mahaveer Singhvi
Joint Secretary (ACST) IES

Technovation Awards



Mr. Ashok Mishra
IC, IESA



Mr. Jaswinder Ahuja
Consultant IIT, Costanza Design Systems



Mr. Arindam Chakravarthy
IIT Bombay, Texas Instruments, India

25th Jan 2024: Panel Discussions

Topic: Product Design – Fabless VLSI Design and Role of New Age EDA

New Age EDA has become increasingly important, with an emphasis on AI integration. The panelists highlighted the same along with the evolution of New Age EDA, enabling the extraction of meaningful data, contributing to faster and improved development. However, a notable challenge lies in effectively integrating AI with existing designs, requiring focused efforts and support from both industry and government.

Key Points to Consider:

- Facilitate innovative policies to support advancements in EDA and IP development.
- Encourage collaboration between academia and industry for knowledge exchange.
- Allocate resources for R&D to drive innovation in fabless product design and IP development.
- Encourage young minds to establish new setups and contribute to the semiconductor industry.



In the photo from left to right: Mr. Sridhar (SFAL), Mr. S V Rao (Corporate Vice President, SmartSoC), Ms. Nithya Raghavan (Executive Director, Applications Engineering, Systems Design Group Synopsys), Mr. Sreeram Chandrasekar (Product Engineering Group Director, Cadence Design Systems), Mr. Srinath Devalapalli (Sr Director IP Implementation, Central R&D, Alphawave Semi)

Topic: State Readiness – Enabling Through ESDM Policy Initiatives

India has emerged as a top priority for ESDM industries post-COVID, following China, Taiwan, and the US. State governments are actively participating in this endeavor through various policy initiatives, aiming to make India a premier destination for large-scale semiconductor manufacturing.

Highlighted Programs and Solutions:

- Karnataka Government has provided over 50 supportive policies since 2013 for ESDM growth and infrastructure development
- State Government Offering incentives to attract semiconductor investments
- Prioritizing ATMP, OSAT, and PCB manufacturing
- Creating an electronics manufacturing cluster for ESDM companies



In the photo from left to right: Shri Darshan, H V (IAS, Managing Director, KITS, Govt of Karnataka), A M Devendranath (CEO Feedback Advisory), Shri Abhijeet Agrawal (IAS, MD MPSEDC, Govt of Madhya Pradesh), Shri Ashok Panda (Govt of Odisha)

25th Jan 2024: Panel Discussions

Topic: India's Startup Ecosystem, Uniqueness, Way Forward to Sustainable Innovation : Brand Building Through Product Creation and Innovation

Despite climbing to the 3rd position in the global ranking scientific publication, India still imports 80-85% of PCBs, highlighting the urgent need for domestic production. Panel discussions comprehensively cover aspects ranging from academia collaboration, manufacturing collaboration, sustainable innovation to product-enabled startup solutions.

Forward-looking Solutions:

- Dedicated ESDM hubs to foster collaboration between various stakeholders.
- Emphasize and support startups that focus on product creation and innovation.
- Promote close collaboration with customers, industries, and the government for collective growth.
- Encourage Green Technology Integration in ESDM processes.



In the photo from left to right: Mr. Goutam Singh (Founder & CEO of Fermionic Design), Mr. Neel Gala (CTO/Co-Founder, InCare Semiconductors), Shri Nishit Gupta (Scientist E, MeitY), Mr. Uttam Singhal (EVP & MD - Canada Operations, Signoff Semiconductors), Mr. Anil Kempanna (CEO, Cienra), Mr. Subodh Sachan (STPI)

Topic: Innovations in Embedded Electronics: Automotive and Industrial/Datacenter/Enterprise Applications

As consumer behaviors and consumption features undergo rapid changes, the ESDM space is stepping up to meet these evolving needs. The panel, in alignment with this, delves into innovations in the Automotive sector, addressing aspects like Zonal domain Architectures, Connected Vehicles, Driver Assistance Systems, EV, Safety, and Security.

Key Points to Consider:

- Prioritize robust security measures across all levels
- Learn and adopt global best practices in embedded electronics.
- Follow regulatory standards, especially in the automotive industry, to meet safety and quality standards.
- Promote strategies for effective Electrification of Vehicles (EVs) within the automotive sector to align with global sustainability goals.



In the photo from left to right: Mr. Rahul Bedi (VP of SW R&D NXP Semiconductors), Mr. Sujeet Sreenivasan (VP-Automotive Technology, Ignitarium), Mr. Sanjay Gupta (President and CEO Spark Minda, Chairman, IESA), Mr. Sudhir Nayak (Treasurer, IESA), Mr. Bharatendu Mishra (Managing Director - India Arrow Electronics), Mr. Vivek Tyagi (Managing Director - Sales, Analog Devices)

25th Jan 2024: Panel Discussions

Topic: Synergizing Talent Development Initiatives towards creating local ecosystem with Global Impact

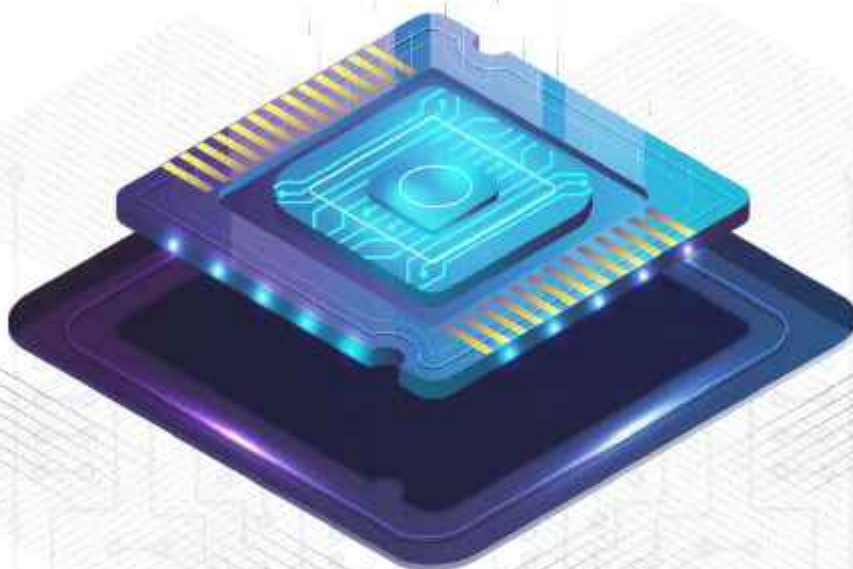
Learning and upskilling are ongoing processes, India recognizes the critical role of academics and skilling programs in nurturing talent for the ESDM industry. The government has also launched several initiatives to support this synergy and ensure a well-rounded and skilled workforce, fostering ongoing innovation in the dynamic field of ESDM.

Suggested Solutions:

- Implement skill enhancement programs
- Allocate funds for research and development in academic institutions
- Ensure students are equipped with practical and industry-specific knowledge
- Setting up VLSI lab programs
- Requires Actual Fab lab exposures to Students
- Focus on Micro-credentials and short courses



In the photo from left to right: Dr. Pradip Thaker (d-matrix), Ms. Chetna Mohan (Elcamino), Dr. Manoj Kumar (STMicroelectronics), Dr. Abhilasha Gaur (COO - Electronics Sector Skills Council of India (officiating CEO)), Prof. Shweta Srivastava (Dean, HOD, JIIT, Noida), Prof. Sushabhan Avasthi (Associate Professor, IISc Bengaluru)



25th Jan 2024: Speakers Gallery



Mr. Vivek Tyagi
Advisor to the Board IESA, MD, Sales
Analog Devices India



Mr. Raja Subramoniam
VP & Country Director,
Synopsys India Pvt Ltd



Mr. Marvin Landrum
Director, Mixed Signal Solutions,
GemsInductor and Electronics, MI



Mr. Anku Jain
MD, Mediatek



Mr. Darshan Thangoli Lakshminanth
Director, Applied Materials



Mr. Sumit Kumar Verma
Senior Manager,
Karnes Technology India context



Shri. Rajeev Chandrasekhar

Hon'ble MoS for Skill Development, Entrepreneurship, Electronics and Information Technology, and MoS Jai Shakti



Mr. Dhaya Snijders
Netherlands Innovation Network India



Mr. Ved Prakash Mall
Director - Sales and Marketing IESA



Mr. Sanjeev Sharma
CEO Globalize Sweden



Prof. Udayan Ganguly
IT Director

Report Release

Compendium of Semiconductor & ESDM Policies in India -2024 Edition



In the photo from left to right: A M Devendranath (CEO, Feedback Advisory) Col. Anurag Awasthi VP, IESA, Mr. Sanjay Gupta (President and CEO, Spark Minda, Chairman, IESA), Mr. Rangesh Raghavan (Corporate Vice President & GM, India, Lam Research), Dr. Ekroop Caur (IAS, Secretary IT/BT & E, Govt of Karnataka), Shri S Krishnan (IAS, Secretary MeitY, Guest of Honour), Mr. John Neuffer (President and CEO, SIA), Mr. Gary Campbell (EVP, Central Engineering, Arm), Dr. V Veerappan (Vice Chairman, IESA), Mr. Ashok Chandak (President, IESA)

The Government of India is a key enabler in providing financial and non-financial support in addition to ease of doing business to boost interest and investment by the private sector in large-scale design and manufacturing. Around 8 states in India, including Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Odisha, Tamil Nadu, Telangana, and Uttar Pradesh, have come up with a clear mention of catering to the Semiconductor Industry. Out of these, 4 states (Gujarat, Odisha, Tamil Nadu, and Uttar Pradesh) have already come up with a specified Semiconductor Policy.

As the premier industry association and thought leader in the Nation in Semiconductor and ESDM space, IESA has released its latest report, the **Compendium of Semiconductor and ESDM Policies in India - 2024 Edition**. This comprehensive report serves as a guide to the policies and incentives implemented by the Government of India and 14 states, making it an essential tool for decision-makers- the government, the investors, the business leaders, the entrepreneurs, and also the future policymakers in the semiconductor and electronics industry.

The summary was developed under the guidance of senior functionaries in MeitY, industry leaders, and numerous professionals who have contributed to this endeavor. It provides a factual summary of the Semiconductors and ESDM related Policies of the Government of India and State Policies, covering aspects such as Manufacturing & Fabless Policy, Eligibility of Companies, Fiscal Subsidies, Non-Fiscal Subsidies, and Policy for Fabless Firms.

IESA Technovation Awards 2024



Centre for Advanced Studies in Electronics Science and Technology, University of Hyderabad



Central Manufacturing Technology Institute



Silicon Labs



PrimeSoc Technologies



Meukron Technologies Private Limited



Rapture Innovation Labs Pvt. Ltd.



Parag Naik
CEO, Saankhya Labs Pvt. Ltd.



Dr. E V Ramana Reddy, (Retd. IAS)
Former Additional Chief Secretary to Hon'ble Chief Minister, Karnataka



Dr. Abhay Karandikar
Secretary, Department of Science & Technology, India



Prof. Tummala Rao
Distinguished and Endowed Chair Professor, Electrical and Computer Engineering & Materials Science and Engineering, Georgia Tech

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IESA Diversity Awards 2024

Celebrating Diversity in the ESDM Industry

In the pursuit of diversity and inclusion, IESA proudly acknowledges and honors women leaders in the ESDM sectors, presenting them with Diversity Awards for their outstanding contributions. These women pioneers, recognized for their exemplary work, serve as inspiring role models for others, driving positive change and innovation within the industry. Through such initiatives, IESA reaffirms its commitment to supporting and empowering women in the ESDM ecosystem, fostering an environment where talent and diversity thrive.



Ms. Malini Narayanamoorthi
Country Head and Senior Design of Engineering,
Renesas India



Ms. Preeti Mathews
Technical Director, NXP India Pvt. Ltd.



Ms. Raka Singh
Director - Software Product Management,
Analog Devices



Dr. Ranjani Narayan
Chief Technology Officer,
Morphing Machines Private Limited

Vision Summit Testimonials

We are pleased to be a part of IESA's flagship event. IESA is doing its best for everything within its capacity to ensure cross-learning takes place among all the attendees here. Moreover, the summit provides fertile ground for networking and encouraging partnerships for us. As exhibitors, we are excited to engage, share, and explore synergies that will propel the industry forward.

- **Girish Gata**
Keysight Technologies

The experience was good, and day 1 of the event received a positive response. Today, on the second day, we look forward to further stimulating discussions, valuable connections, and more networking opportunities in the ESDM industries. Additionally, this year, we have seen greater engagement and interaction among attendees. Glad to be a part of the summit!

- **Susan**
Lead-Corporate
Communications, KLA

We had the pleasure of meeting new customers and exchanging valuable experiences. The event welcomed a diverse array of visitors, enabling us to forge meaningful connections and expand our network. Our agenda to connect and engage with new faces was successfully fulfilled, making this event a resounding success for us.

- **Pradeep CR**
Director- Technical account,
Austia Inc.

Attending events like Vision Summit really makes a difference in our industry. It helps us all come together and stay motivated. We met some new customers, which was awesome, and had some really great interactions. Plus, we connected with some really good visitors who we think could be valuable partners down the line. "I can't wait to bring fresh ideas and hopefully get some new clients at the next summit!"

- **Brijesh Chandrala**
Lead FPGA design engineer,
Prodigy Technovations Pvt Ltd.

Being with IESA for 10 years now, it feels awesome to be here representing ourselves at this great event. The Vision Summit is a great initiative by IESA because it's all about sharing the latest scoops on companies and products in the ESDM industries. It's definitely a good forum for networking. This platform is where connections happen!

- **Praveen Kaushik**
Govt. Affairs,
Applied Materials

India Vision Summit is the most captivating event in the world of Semiconductors. The two day conference & exhibition had excellent turnaround of speakers & delegates from startups, chip design companies, local and global ESDM players, state and central Govt officials etc. VS is a one stop shop to learn more about building your semiconductor business environment

- **Sri. Nareesh Rana**
EC Member

IESA Vision Summit 2024 serves as an excellent opportunity for industry leaders, visionaries, and government officials to converge and explore new possibilities in digital transformation. At MediaTek, we believe innovative technologies including artificial intelligence, Generative AI, machine learning, automotive intelligence, and edge computing will revolutionize the tech landscape in the fast-evolving age of AI

Furthermore, we are working closely with Meta's Llama 2 to enhance on-device generative AI in edge devices and introduced flagship chipset, MediaTek Dimensity 9300 equipped with big core designs and supports Gen-AI on-device processing for seamless, secure edge AI experiences.

- **Anku Jain**
Managing Director
MediaTek India.

Glimpses from the Exhibition



Glimpses from the Summit



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