

## President's Message



Dear leader,

We are glad to present ISA Quarterly IQ, our quarterly newsletter. The incoming Executive Council has meant a flurry of activities and the decision to move forward with a focus on extending the value chain to Electronic Systems Design & Manufacturing companies.

Today ISA is addressing chip design companies, embedded software and hardware companies plus OEMs. Your industry body continues to support the business interests of its members. We have had several networking events across regions, opening of the local chapter in NCR, release of key industry research reports and overseas delegations.

The need to provide credible data and industry insights to the Government of India and state governments is an ongoing activity.

As ISA enters its sixth year of operations, we would like to thank the founding team as also members, government officials and friends from the media who have played a crucial role in its growth.

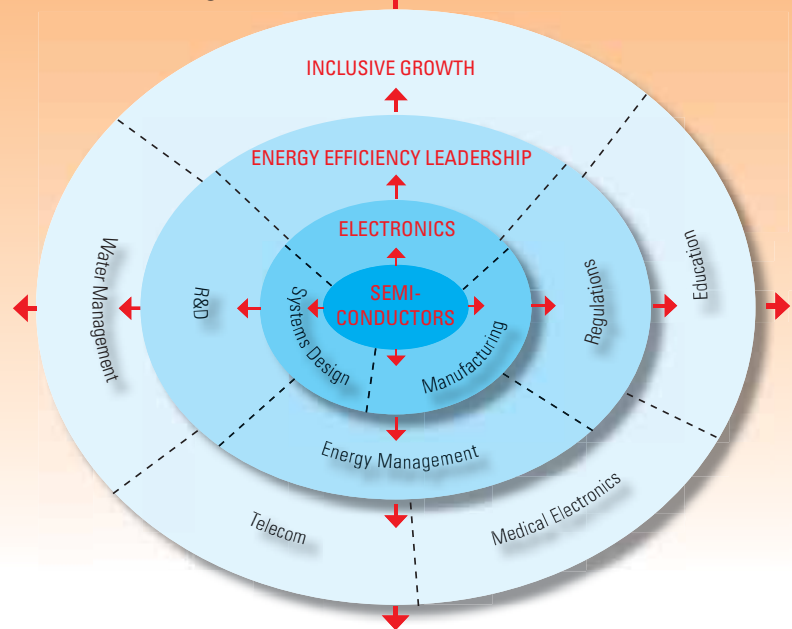
ISA Quarterly IQ aims to capture some of the key activities of the past few months. I look forward to receiving your feedback and views at [president@isaonline.org](mailto:president@isaonline.org).

Best wishes,

Poornima Shenoy  
President - ISA

## ISA Vision

"Electronics can change India"



### ESDM Segments

- Aerospace & Defence • Automotive • Consumer • Education • Identification • Industrial
- Medical Electronics • Solar • Telecom • Water Management

Electronic Systems Design and Manufacturing is India's growth opportunity. Semiconductors are at the heart of electronics. ISA has built a strong semiconductor foundation and is now extending its charter to include ESDM to propel the growth of the electronics industry.

## ISA Executive Council 2010



### Sitting Left to Right

- Dr. Praveen Vishakantaiah**  
President, Intel India
- Rajesh Ram Mishra**  
Treasurer, ISA  
Vice President - Product Engineering Solution  
Wipro Technologies
- Dr. Biswadip (Bobby) Mitra**  
Chairman, ISA  
President and Managing Director  
Texas Instruments India
- Dr. Satya Narayan Gupta**  
CEO & President  
Concept2Silicon Systems
- Poornima Shenoy**  
President, ISA

### Standing Left to Right

- Vivek Sharma**  
Regional Vice President - Greater China & South Asia  
India Operations, ST Microelectronics
- Ganesh Guruswamy**  
Vice President & Country Manager  
Freescale Semiconductor India
- B V Naidu**  
Adviser, ISA  
Chairman, Sagitaur Ventures
- Raghu Panicker**  
Sales Director - India, Mentor Graphics India
- Dr. Pradip K Dutta**  
Vice-Chairman, ISA  
Corporate V P & Managing Director, Synopsys India
- Sanjay Nayak**  
Chief Executive Officer & Managing Director  
Tejas Networks

## TECHNOVATION

AN ISA INITIATIVE  
Celebrating Excellence in Electronics...

### Technovation Awards 2011 Applications open

Contact:  
Aparna Baidoor  
[technovation2011@isaonline.org](mailto:technovation2011@isaonline.org)



## 'It's our collective responsibility to take the industry to the next level of growth'

### • *What comes to your mind as the milestones in ISA's five-year-old journey?*

Five years back a few leaders from the semiconductor industry, driven by foresight and passion, formed ISA. The past ISA Chairmen and Executive Councils, ISA President Poornima Shenoy and her team, and members of the semiconductor industry have played a leadership role in taking ISA to where it is today. It has been a remarkable and consistent team effort and the results are there for all of us to see.

Some of the milestones are:

#### Policy:

- Electronic Systems Design and Manufacturing (ESDM) policies being deliberated by focus groups in the government with ISA.
- The impetus of the solar photovoltaic industry in the country, through the announcement of the Semiconductor Policy - 2007.
- Semiconductor Policy - 2010 for Karnataka that lays the ground for funding and supporting hi-tech startups and SMEs in the state.

#### Research:

- ISA F&S reports on the India semiconductor market that provides regular and credible data. These reports help in bringing local and global focus on the potential of the Indian electronics and semiconductor market.
- ISA EYI report on the global competitiveness of Indian semiconductor design, quality of manpower, ability to scale rapidly, protection of IP and ability to carry out end-to-end, complex designs.
- ISA IDC report on the size, capability and potential of the Indian semiconductor design industry.
- ISA NMCC report on the global and Indian solar PV industry.

#### Industry awareness:

Creating focused interest in the electronics sector with stakeholders in government, media, venture capitalists, technology schools and the ecosystem beyond semiconductors that extends to ESDM.

#### Engagement:

- Ability to engage with and elicit the support and participation of industry leaders within the country and at a global level.
- Ability to involve R&D and sales leaders in building the agenda for the electronics sector.
- Conceptualizing and executing ISA Vision Summit and other events that engage the entire ecosystem.
- Constant growth in membership.

- Decision to move beyond Bangalore and start regional chapters with membership extending to ESDM companies.

### • *How has the industry and ISA grown in these few years?*

The semiconductor industry has grown at a steady pace over the last five years. Let's take a quick look at the Total Available Market (TAM) in India from 2007.

healthy 20 percent. The report also forecasts the India electronic products industry TAM to grow from \$25.4 billion in 2009 to \$37.1 billion in 2011 at a CAGR of 21.4 percent.

The good news is that we are still at the tip of the iceberg. There are many more electronic system design companies that we have not yet touched. I believe there are at least 1,000 such companies spread across the country. This is a great opportunity for our industry.

So far as the growth of ISA is concerned, we have over 140 corporates as members from across the country, including Bangalore, NCR, Pune, Hyderabad and Chennai. This list includes multinationals, domestic companies, educational institutions, VCs, SMEs and start-ups. In addition to semiconductor companies, an increasing number of our members is being drawn from key electronics system companies.

The ISA Technovation Awards over the years have been attracting high quality entries that make the selection process a difficult proposition. It clearly shows how these awards are seen as a definite value addition ever since we introduced them three years back.

The Government of India recognizes us as the 'voice of the industry' in ESDM. We have had wonderful support from the central and state governments. Besides, ISA has ties with peer industry bodies in the US, UK, Taiwan, Japan and Israel. We have emerged as the source for credible data on Indian industry for all stakeholders and our events are earmarked for participation by leaders and sponsors. ISA has been able to grow while retaining its core objective of providing quality and proactive support to its member base.

### • *What has been the role of industry leaders like you in shaping the ISA vision and taking it forward?*

My predecessors and our large fraternity of industry leaders have had the foresight to visualize the growth of our industry and the agenda for the future. A strong base was set up by them over the past five years. It's now our collective responsibility to take this to the next level of growth.

We believe our big growth opportunity ahead is in electronics, and more specifically, in ESDM. We are excited about this because we are firmly of the view that electronics can change India! With semiconductor as the core engine, ESDM will drive the next growth phase of the industry. ●

## iQ Corner



**Dr. Biswadip (Bobby) Mitra**  
Chairman, ISA  
President and Managing Director  
Texas Instruments India

As ISA completes five years, Chairman Dr. Bobby Mitra looks back on the organization's journey so far. In the next part of the interview, ISA Quarterly IQ will feature his vision for the period ahead.

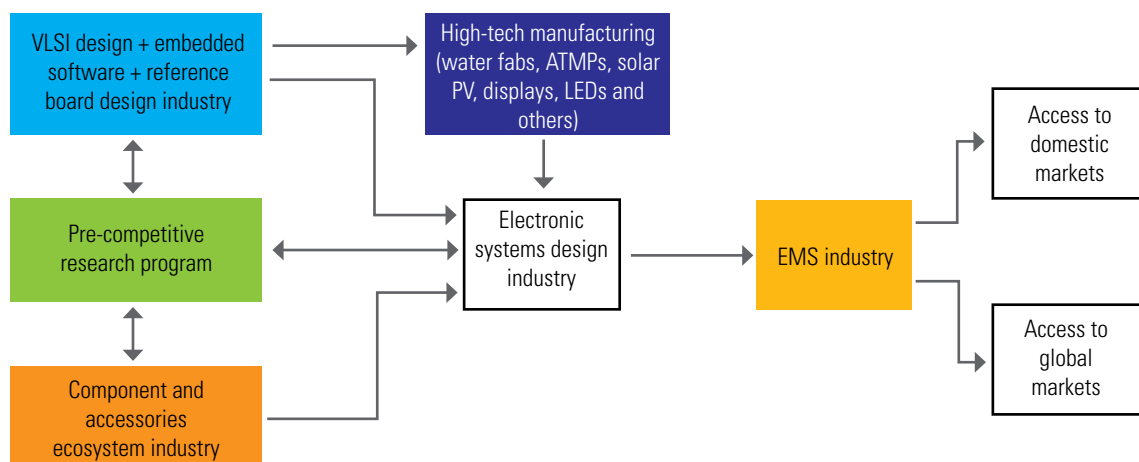
According to the ISA-F&S report that we released in June 2010, India Semiconductor TAM was \$1.74 billion in 2007, \$2.25 billion in 2008 and \$2.66 billion in 2009. So, last year's global recession only had a minimal impact on the India semiconductor market. The report forecasts the semiconductor TAM to be \$3.63 billion in 2010 and \$4.84 billion in 2011, with CAGR at a



## ISA ESDM Segments: Conveners & Segment Charter

Automotive	Industrial	Medical Electronics	Education
<p><i>Convener</i> <b>Ganesh Guruswamy</b> Vice President &amp; Country Manager Freescale Semiconductor India</p> <ul style="list-style-type: none"> <li>• Work with regulatory bodies</li> <li>• Enable growth of the automotive electronics industry</li> <li>• Conduct thought leadership forums</li> <li>• Enable an ecosystem for innovation</li> </ul>	<p><i>Convener</i> <b>Arun Jain</b> Director - Sales &amp; Marketing Texas Instruments India</p> <ul style="list-style-type: none"> <li>• Make 'energy efficiency' and 'quality &amp; reliability' as the key drivers of the industrial segment</li> <li>• Provide leadership on 'technology intervention to increase energy efficiency'</li> <li>• Transition opportunity to go from electromechanical to electronics</li> </ul>	<p><i>Convener</i> <b>Vivek Sharma</b> Regional Vice President - Greater China &amp; South Asia India Operations, ST Microelectronics</p> <ul style="list-style-type: none"> <li>• Identify the ecosystem for the medical electronics industry and build strategy to address it</li> <li>• Identify and address gaps and explore opportunities in the ecosystem to enhance TAM for India</li> <li>• Assess and report the current status and potential for medical electronics in India</li> </ul>	<p><i>Convener</i> <b>Dr. Praveen Vishakantiah</b> President Intel India</p> <ul style="list-style-type: none"> <li>• ESDM ecosystem development for education</li> <li>• Give direction to education policy</li> <li>• Pervasive electronics in education</li> <li>• Build partnerships across the chain</li> </ul>
Telecom	Consumer	Solar	 <p><b>WIN Wire</b> Weekly Industry News</p> <p>For over four years, we have been bringing you the latest news on the electronics and semiconductor industry.</p> <p>For advertising opportunities please contact us at <a href="mailto:research@isaonline.org">research@isaonline.org</a></p>
<p><i>Conveners</i> <b>Sanjay Nayak</b> Chief Executive Officer &amp; Managing Director, Tejas Networks</p> <p><b>Anirudh Mathuria</b> Director, Device R &amp; D Nokia India Pvt. Ltd.</p> <ul style="list-style-type: none"> <li>• Enable increase in design of telecom products from India by Indian companies and MNCs</li> <li>• Enable increased manufacturing of telecom equipment and components in India both for domestic market and exports</li> <li>• Align ISA's telecom initiatives with other industry bodies</li> </ul>	<p><i>Conveners</i> <b>Naveen Mandhana</b> Director &amp; Senior Vice President Videocon Industries Limited</p> <p><b>Vipin Gupta</b> Senior General Manager LG Electronics</p>	<p><i>Convener</i> <b>Dr. Madhusudan Atre</b> President &amp; Head - Solar Sales Applied Materials in India</p> <ul style="list-style-type: none"> <li>• Help growth of solar industry in India to attain the Jawaharlal Nehru National Solar Mission (JNNSM) goals</li> <li>• Focus on the ecosystem, market, technology and R&amp;D, standards, finance and government interface aspects of the solar industry – to identify the key challenges, solutions and recommendations</li> </ul>	
Identification	<p><i>Convener</i> <b>Ashok Kumar Chandak</b> Senior Director - Global Sales &amp; Marketing NXP Semiconductors India</p>		

## Electronic Systems Design & Manufacturing (ESDM) Ecosystem

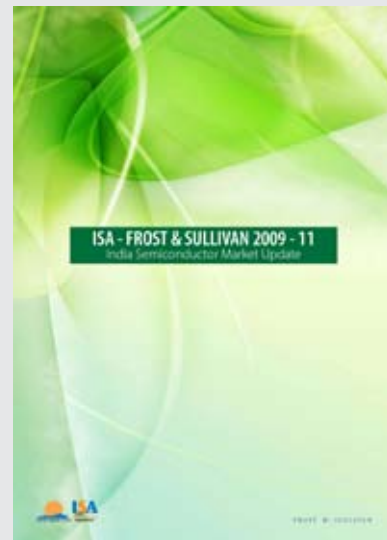




## ISA Core Initiative Groups CIGs

<p><b>Entrepreneurship/SME</b></p> <p><i>Convener</i> <b>Dr. Satya Narayan Gupta</b> Chief Executive Officer &amp; President Concept2silicon Systems</p>	<p><b>Industry Outreach</b></p> <p><i>Convener</i> <b>Raghu Panicker</b> Sales Director - India Mentor Graphics India</p>	<p><b>Women's Forum</b></p> <p><i>Convener</i> <b>Pamela Kumar</b> Director - India STG Labs IBM India</p>	<p><b>Vision Summit 2011</b></p> <p><i>Conveners</i> <b>Dr. Pradip K Dutta</b> Vice Chairman, ISA Corporate Vice President &amp; Managing Director Synopsys India</p> <p><b>Rahul Arya</b> Director Marketing and Technology Sales Cadence Design Systems India</p>
<p><b>Regulatory Forum</b></p> <p><i>Convener</i> <b>Rajiv Kapur</b> Managing Director Broadcom India</p>	<p><b>Technovation 2011</b></p> <p><i>Convener</i> <b>Anil Gupta</b> Managing Director &amp; Chief Executive Officer Metalogic Circuits India Pvt. Ltd.</p>	<p><b>UK Country Forum</b></p> <p><i>Convener</i> <b>Guru Ganesan</b> Managing Director ARM India</p>	
<p><b>Constitution</b></p> <p><i>Convener</i> <b>S Janakiraman</b> President &amp; CEO - R&amp;D Services MindTree Ltd.</p>			

To procure a copy of our latest reports:



Contact: Dr. Vidya Mulky at [research@isaonline.org](mailto:research@isaonline.org)



**ISAVISION SUMMIT**  
February 21 & 22 2011  
Bangalore

### Electronic Systems Innovation: India's opportunity to drive global markets

The Indian market is uniquely diverse and versatile. Opportunities abound across market segments and price brackets, with the potential to innovate and adapt. The Electronic Systems Design and Manufacturing (ESDM) industry is poised to ride the rising wave of domestic demand for electronic products. The Indian industry is proficient in design and applications development. Capabilities in these core areas can catapult the industry towards greater innovation, and development of products for the local, regional and global markets. ESDM, with the stress on energy-efficiency and inclusive growth, can propel the country towards global leadership.

The ISA flagship event Vision Summit 2011 is the leadership conclave for the Electronic Systems Design and Manufacturing industry in India. This summit is attended by business leaders, policy makers, strategists, entrepreneurs and venture capitalists.

**Date** : February 21 & 22, 2011  
**Venue** : Hotel Taj West End, Bangalore

For sponsorship opportunities and participation, please contact  
**Gaurav K Punjabi** at [vs@isaonline.org](mailto:vs@isaonline.org)



## Events

### Annual member meet on April 29



The ISA annual meet was organized at the Leela Palace, Bangalore. This event focus was also to felicitate the outgoing Executive Council EC 2009 and welcome the incoming EC 2010 and felicitate all the Core Initiative Group CIG members for their support and contributions during the year.

### Release of ISA Solar PV Report 2010 on May 6



The ISA-PSA Report has been supported by the Office of the Principal Scientific Advisor to the Government of India, Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) and AES Solar Energy. Dr R. Chidambaram, Principal Scientific Advisor, Government of India released the report in May 2010 in New Delhi.

### ISA TLF with Dr Paramesh Gopi, President and CEO AMCC on May 13



**Topic: Clouds in Emerging Markets**

This was held at Hotel Leela Palace Bangalore and attended by over 60 senior executives from the industry.

### Interactive session on June 10



Dr. K S Chari, Registrar, Semiconductor Integrated Circuits Layout Design Registry, Government of India interacted with ISA members on June 10 at STPI Bangalore. The presentations included updates on the SICLD Act matters, IC layout design application filing procedures in the registry, chip IP protection issues and benefits to the companies, chip IP data collation exercise of SICLDR, legalities involved and other related points. In this photograph, he is seen with Director, STPI Bangalore, Ms Rajalakshmi.

### ISA Thought Leadership Series with Dongbu HiTek on June 14



A panel discussion was held on the electronics ecosystem: plans and strategies for innovation and growth at ITC Gardenia, Bangalore. It was moderated by Rahul Arya of Cadence Design Systems (I) Pvt Ltd. The panelists included:

- Lou Hutter, senior VP and GM, Analog Foundry Business unit, Dongbu HiTek, Korea
- N. Ramakrishnan, President and CEO, Mandate Chips & Circuits Pvt. Ltd.
- D. Rajakumar, General Manager, Third Millennium Test Solutions (3MTS)
- Ganapathy Subramaniam, President and CEO, Cosmic Circuits Pvt Ltd
- Arnob Roy, President-Engineering, Tejas Networks

### ISA-Frost & Sullivan Report Release on June 17



The report was released in New Delhi by Dr. MM Pallam Raju, Honorable Minister of State for Defence, Government of India.



## Local Chapters

### i2 at Freescale Noida on May 25



i2 ISA Interactive was hosted by Freescale Semiconductor in Noida. ISA Chairman Dr Bobby Mitra presented the Vision for the ESDM industry followed by a high-powered panel discussion on how to promote the Indian ESDM industry in the coming years.

The panel comprised of leaders from CEHA member associations. Rajoo Goel, ELCINA; Pankaj Mohindroo, ICA; Ganesh Guruswamy, ISA; Pradeep Kumar, CEAMA with Dr M Zarabi as the moderator.

### i2 at AMCC Pune on June 16



An ISA Interactive was hosted by AMCC, Pune. ISA Chairman Dr Bobby Mitra presented the Vision for the ESDM industry followed by a panel discussion on automotive electronics ecosystem. The panel comprised of Pradeep Dharane, Managing Director, AMCC; Shubhangi J Chiplonkar, General Manager-Electronics, Bajaj Auto; Anup Sable, Senior Vice - President, Automotive & Engineering, KPIT Cummins; Vishwas Vaidya, Deputy General Manager, Electronics Design, Tata Motors; Dinesh Shyamsundar, Head - R&D, Varroc Engineering; and Vivek Tyagi, Country Sales Manager, Freescale Semiconductor India as moderator.

ISA recognizes that the Electronic Systems Design and Manufacturing (ESDM) industry is emerging across the country. ISA would like to maximize its reach to member companies and promote member participation and engagement by establishing Regional Chapters. A Regional Chapter will be responsible for member activities in the region aligned with the overall ISA mission and strategy. Each Regional Chapter will have a leader responsible for the activities of the Regional Chapter and will be the bridge between the local member community and the ISA Executive Council.

Jaswinder Ahuja, Former ISA Chairman, Corporate Vice President & Managing Director, Cadence Design Systems India is the head of the NCR Chapter. Dasaradha R Gude, former ISA EC Member and Vice-President & Managing Director, AMD India is the head of the Hyderabad Chapter.

### i2 at Conexant Hyderabad on July 13



An i2 was hosted by Conexant Systems in Hyderabad. ISA Chairman Dr Bobby Mitra presented the Vision for the ESDM industry. This was followed by an interactive panel discussion on 'Entrepreneurship in the ESDM industry'. The panel comprised of senior leaders, like Dasaradha R Gude, AMD India; Dr Satya Gupta (ISA EC Member), Concept2Silicon Systems; Lakshmi Narayan Reddy, Conexant Systems; Sateesh Andra, Draper Fisher Jurvetson with L Somasekar of the Hindu Business Line as moderator.

### Workshop on Solar Inverters in Kolkata on July 23



Dr. Pradip Dutta, Vice-Chairman, ISA speaking at a workshop on solar inverters in Kolkata on July 23. Sitting on the dais (from left) are T.K. Sarcar, Senior Director, Department of IT, Government of India; Dr. S.P. Gon Choudhari, MD, The West Bengal Green Energy Development Corporation Ltd (WBGEDCL); Dr. Debesh Das, IT Minister, Government of West Bengal; and Siddharth Singh, Secretary, IT Department, Government of West Bengal. ISA organized the workshop in association with WBGEDCL, West Bengal Electronics Industry Development Corporation Limited (WEBEL) and Advantage Bengal, a state government initiative.

The workshop was aimed at providing an all-round perspective on the opportunities for solar inverter manufacturing and its market in India.



## Industry Research

### ISA-PSA Report: Solar PV Industry 2010: Contemporary scenario and emerging trends

The report studies the current scenario of the solar PV industry, both global and domestic.

The ISA-PSA Report has been supported by the Office of the Principal Scientific Advisor to the Government of India, Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) and AES Solar Energy.

The focus of the report is mainly on the following aspects:

- Status of the global PV industry with a focus on Europe, the US, China, S. Korea, Japan and Taiwan
- Status of the Indian solar PV industry, including its strengths and challenges
- Government initiatives to promote this industry,

including a detailed discussion on the recently announced Jawaharlal Nehru National Solar Mission (JNNSM).

#### Emerging trends of the Indian solar PV market:

- Solar PV applications in India have followed a different trend from global practices. While globally, there has been higher focus on grid connected applications, the Indian PV market has predominately focused on off-grid applications.
- JNNSM is a welcome step from the Government, to accelerate growth of the Indian PV industry. The Mission addresses all the major issues currently being faced by the industry and also acknowledges key challenges in achieving the Mission objective.

Grid connected solar power generation is a key thrust area of JNNSM.

- JNNSM is technology neutral and defines a research & development roadmap to develop indigenous strengths in technology and reducing the dependence on international markets. JNNSM also addresses issues of manpower development for the industry.
- The above initiatives and the recent guidelines announced by the Government of India for solar power projects will promote the domestic solar PV industry.

### ISA-Frost & Sullivan 2009-2011: India Semiconductor Market Update

This is the third update on the semiconductor market. The report highlights growth areas for the period 2009 to 2011.

The current report studies the following application segments:

- Telecommunications
- Wireless handsets
- IT & office automation
- Consumer electronics
- Industrial electronics
- Automotive electronics
- Others (aerospace, defence, medical electronics and smart cards)

According to ISA-Frost & Sullivan Report Update 2010, the Total Market (TM) revenue for semiconductors in India during the year 2009 stood at \$5.4 billion; and the Total Available Market (TAM) revenues at \$2.6 billion. TM is estimated to reach \$8 billion by the year 2011, while TAM revenues are projected to increase at a higher rate and grow to \$4.8 billion by the year 2011.

The growth drivers for electronics manufacturing in India are wireless handsets, communications and IT & OA (Office Automation) and which together will account for almost three-fourths of both the semiconductor TAM and TM by 2011.

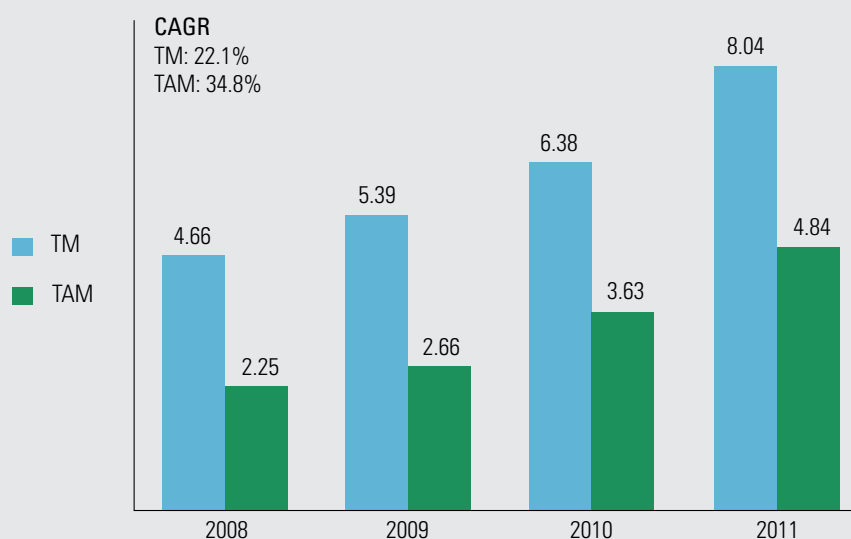
The semiconductor products that are expected to drive the revenues are:

Memory driven by intelligent consumer electronic appliances, the need for higher memory capacities in telecom infrastructure equipment and the usage of higher capacity add-on cards in imaging products;

ASSP (Application Specific Standard Products) driven by SoC (System-on-Chip) solutions for handsets rapidly growing markets of LCD TVs and LCD monitors;

Microprocessors driven by wireless handsets and telecom equipment.

#### Overall India semiconductor market

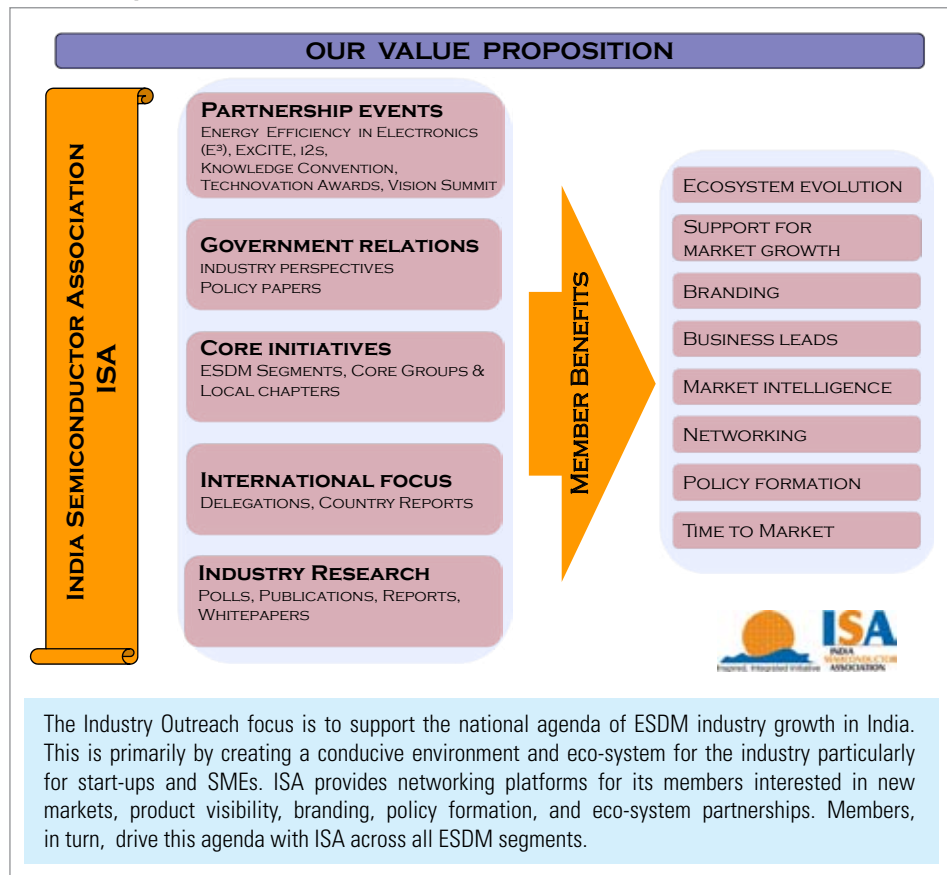


Source: ISA-F&S report update 2009 - 2011

Values in \$ billions



## Industry Outreach



## New Members

- Caliber InterConnect Solutions Pvt. Ltd.
- Four Arrow Systems and Technologies
- Infosys Technologies Ltd.
- Magma Design Automation India Pvt. Ltd.
- Metalogic Circuits India Pvt. Ltd.
- Nokia India Pvt. Ltd.
- Su-Kam Power Systems Ltd.

## ISA Member Directory 2011



Book your ad space now!  
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**Chandrika Anil** at:  
[membership@isaonline.org](mailto:membership@isaonline.org)

## International Relations

### ISA - HTIA MoU



The High Tech Industry Association (HTIA) of Israel signed a co-operation agreement with ISA on June 8, 2010 in Jerusalem.

The MoU was signed by HTIA Chairman Mr Aaron Mankovski and ISA Vice Chairman Dr Pradip K Dutta. The agreement aims to create a working structure for collaboration between companies, encourage bilateral high-tech business ties, promote innovation and entrepreneurship, and promote joint projects.

The two bodies plan to hold joint conferences, and establish professional relations to leverage current opportunities in the Indian and Israeli markets.

### Delegation to Taiwan

Department of Information Technology (DIT), Ministry of Communications & Information Technology (MCIT), Government of India had taken a delegation to Taiwan led by Rakesh Singh, IAS, Additional Secretary, to meet Taiwanese companies, with the objective to attract investments in the country in the area of electronics hardware manufacturing.

The delegation, from May 30 - June 4, comprised of senior government officials from DIT, National Manufacturing Competitiveness Council (NMCC), Ministry of Commerce & Industry and India Taipei Association (ITA), senior executives from industry, infrastructure developers, consulting firms and representatives from industry associations (ICA, ISA) and Export Promotion Council for EoUs/SEZs.

For feedback and advertising opportunities please contact us at:  
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