



# Electronics & Hardware India Scenario



## Sector Overview (1/2)

The global electronics industry, growing at 4%, is the largest and fastest growing manufacturing industry in the world



India is the 2nd largest television market in the world after China

Indian television market is expected to cross USD 9 billion by 2021



2nd biggest smartphone market in terms of active unique smartphone users, crossing 220 million users, surpassing the U.S.A.



Large pool of skilled manpower and 3<sup>rd</sup> largest pool of scientists and technicians in the world

Source: Ministry of Electronics & Information Technology, Government of India; TRAI Annual Report, IBEF

## Sector Overview(2/2)



Estimated total production in electronics sector in 2017 - 18, exhibiting a growth of 22% over the previous year



Estimated demand of Electronics System Design and Manufacturing (ESDM) by 2023 - 24



Potential employment creation of 28 million by 2020

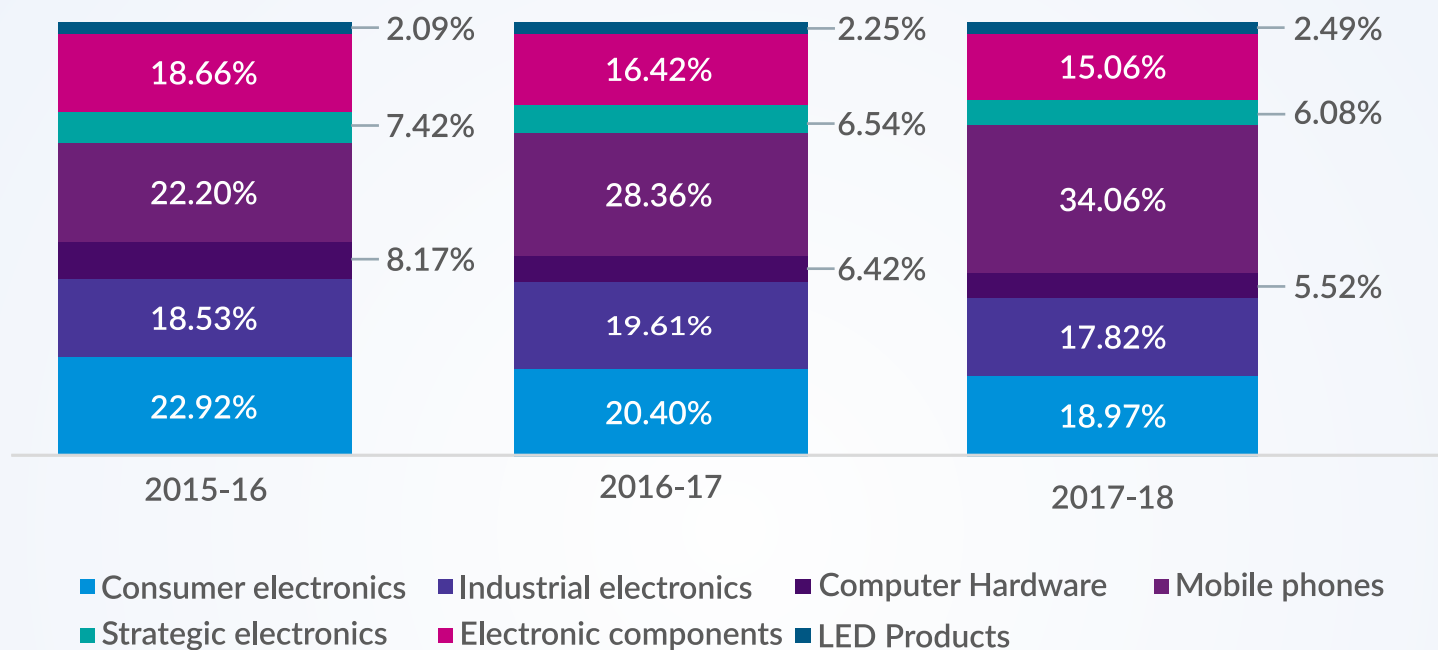
Nearly 2000 new chips designed per year with 20,000+ engineers working on chip design and verification.

Source: Ministry of Electronics & Information Technology, Government of India – Annual Report 2017-18

## Electronics sector segmentaion

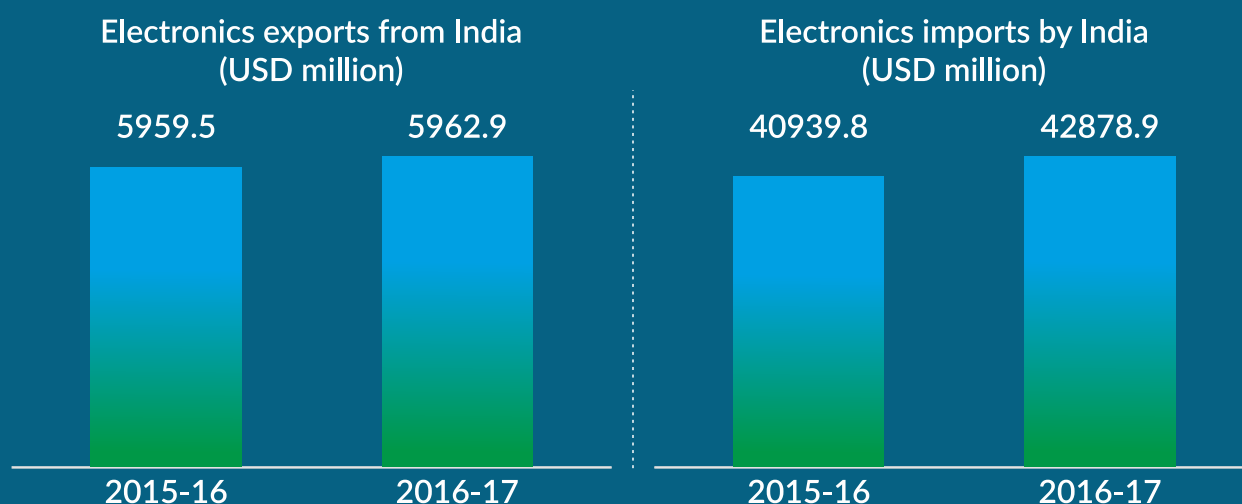
- Mobile phones sub-sector has grown by almost 5 times in the last 5 years; becoming the fastest growing electronic sub-sector
- The electronics sector grew at a CAGR of 21% between 2013 - 14 and 2017 - 18

## Year - wise share in production of electronic sub-sectors



Source: Ministry of Electronics & Information Technology, Government of India - Annual Report 2017 - 18

## Trade details - Electronics sector



Source: Ministry of Electronics & Information Technology, Government of India - Annual Report 2017 - 18



# Government of India Initiatives (1/2)

## Electronics Development Fund

- Will help to create a vibrant ecosystem of innovation and R&D
- Will provide risk capital to companies developing new technologies in the area of electronics, nano-electronics and Information Technology (IT)

## Electronics Manufacturing Cluster Scheme (EMC)

- 50% of the cost for Greenfield clusters and 75% of the cost for Brownfield clusters
- Subsidy upto USD 10 Million per 100 acres
- Target of 200 clusters by 2020

## Modified Special Incentive Scheme (M-SIPS)

- Subsidy of 25% of capital expenditure (20% in SEZs)
- Excise/CVD paid for capital equipment is reimbursed
- Central Taxes and Duties reimbursement

## PhD Scheme

- 1500 PhDs in the area of electronics by 2020
- Skill development for 1 million people

## Preferential Market Access Policy

- Preference to domestically manufactured goods in Government procurement
- Extent of Government procurement will not be less than 30%

## Semiconductor FAB

- Two semiconductor wafer fabrication (FAB) manufacturing facilities to be set-up in the country
- Strong design base with more than 120 units

## Government of India Initiatives (2/2)

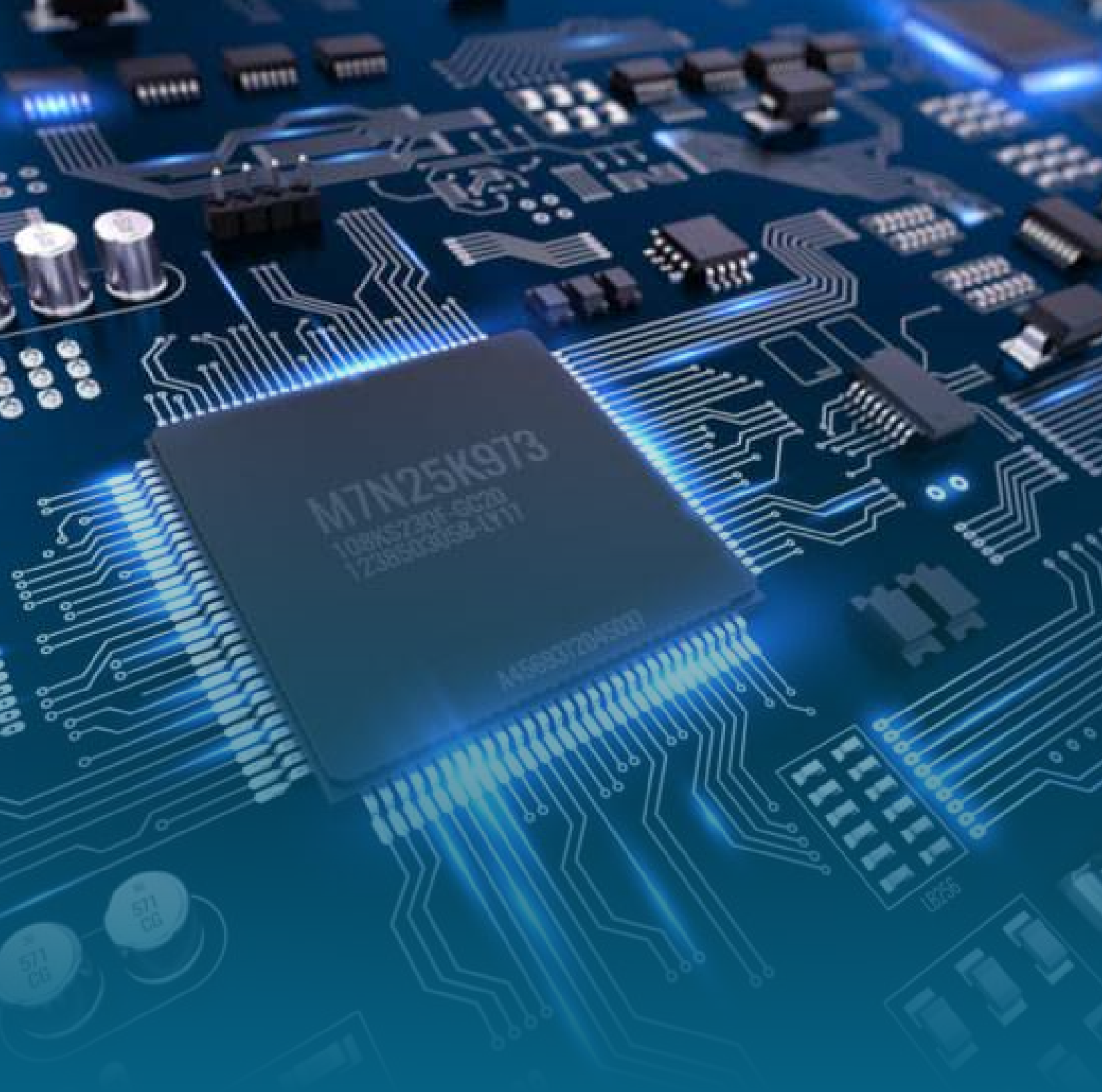
### National Policy on Electronics 2012 : Interventions to support MSMEs

- Reimbursement to the manufacturers in MSMEs
- The scheme will provide financial support as Grant-in-Aid (GIA) for the following activities:
  - Reimbursement of expenses relating to compliance of electronic goods with “Indian Standards” notified by DeitY with the total GIA for one model limited to maximum of INR 1 lakh for 200 models
  - Reimbursement of expenses for testing and certification required for export with the total GIA for one model limited to INR 1.25 lakh for 800 models
  - Development of Electronic Manufacturing Clusters by MSMEs for diagnostic study, soft intervention and for preparing Detailed Project Reports, etc. The total GIA available for the setting up of 20 clusters is maximum of INR 10 lakh/cluster

The scheme is also available for relocation of manufacturing plants from foreign countries

### Government of India is formulating a new National Policy on Electronics

Source: Ministry of Electronics & Information Technology, Government of India



# Tamil Nadu **Scenario**

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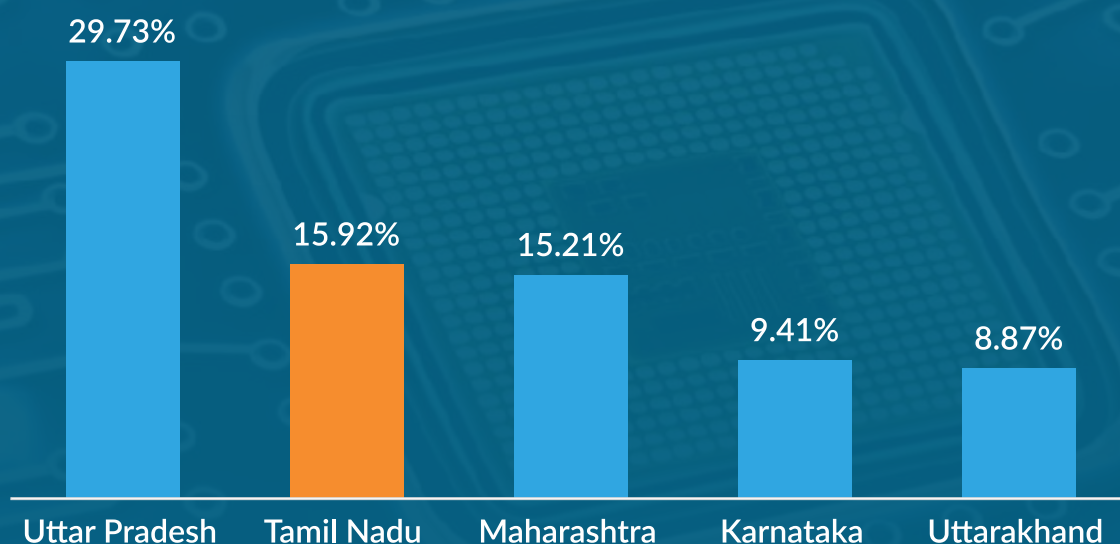
## Electronics Sector Overview (1/2)

Chennai is emerging as an electronic hardware manufacturing hub in India



Tamil Nadu's rank in the computer, electronics and optical products manufacturing in 2015-16, accounting for ~16% of national production

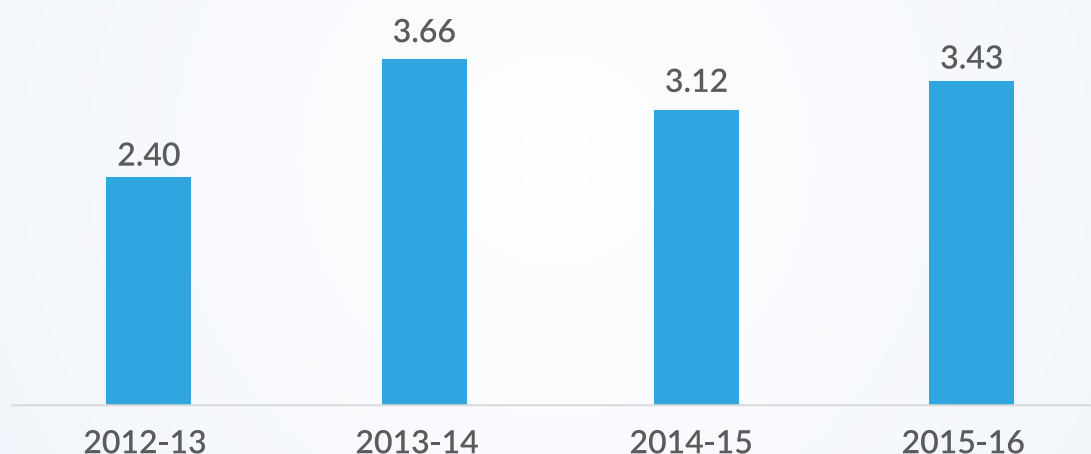
### State - wise share in electronics output in 2015 - 16



Source: ASI 2015-16; investingintamilnadu.com

The electronics output grew at a CAGR of 12.6% between 2012-13 and 2015-16

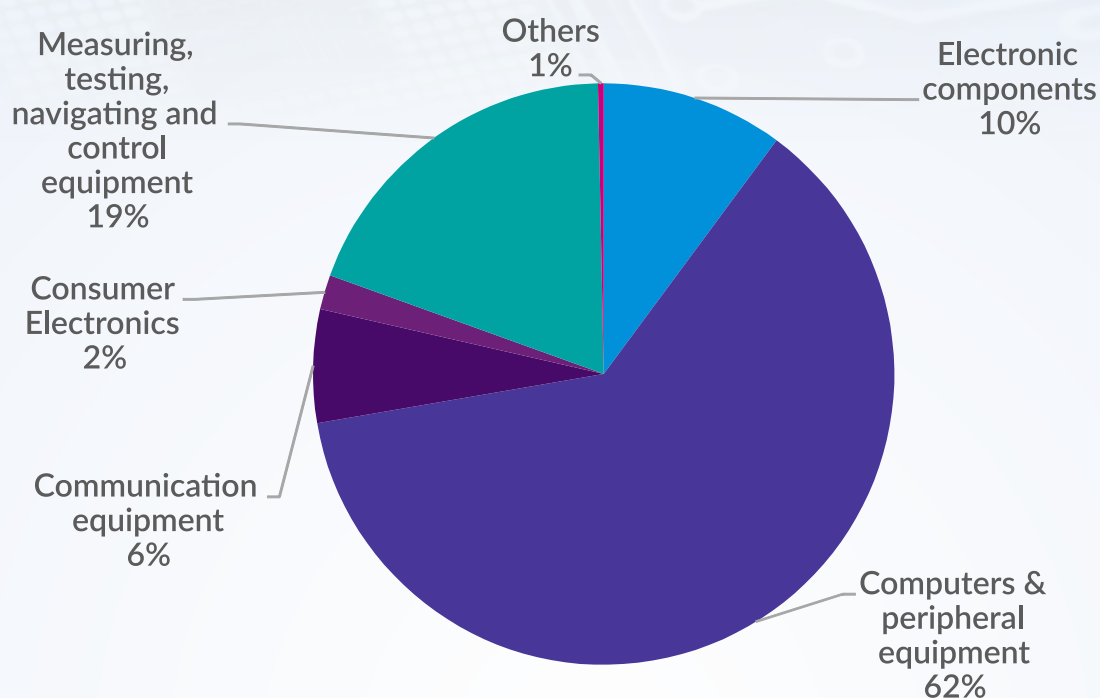
### Year - wise Tamil Nadu electronics output (USD billion)



Source: ASI 2015 - 16; investingintamilnadu.com

# Electronics sector segmentation

Segment - wise share of electronics output in Tamil Nadu in 2015-16 (USD million)



Segment-wise breakup of output in Tamil Nadu in 2015-16

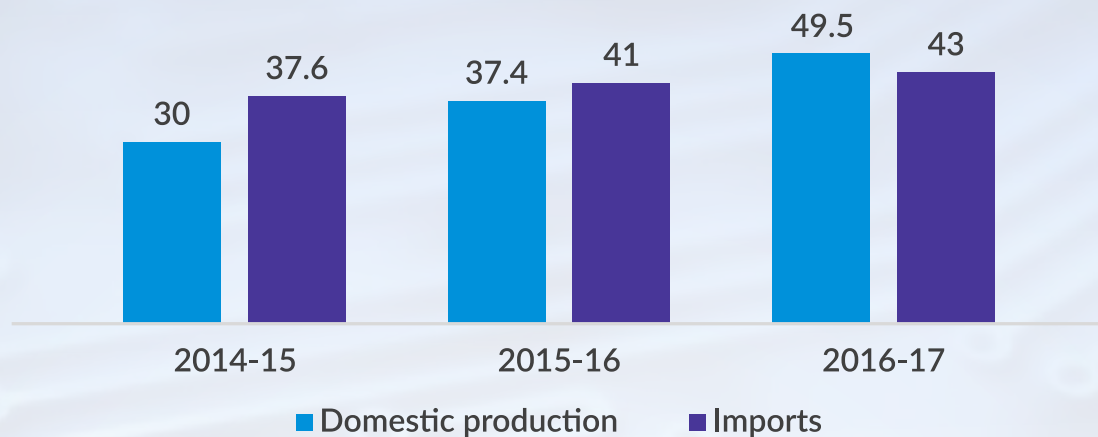
Segment	Output value (USD million)
Electronic components	348.20
Computers & peripheral equipment	2132.04
Communication equipment	216.04
Consumer electronics	65.86
Measuring, testing, navigating and control equipment	658.04
Others	10.90
<b>Total</b>	<b>3420.18</b>

Computers & peripheral equipment accounted for 62% of the total electronics output in Tamil Nadu in 2015-16



# Domestic production in India vs imports by India

Domestic electronic production vs electronic imports by India (USD billion)



- Gradually, domestic production has overcome the imports
- However, an ASSOCHAM & NEC report states that electronic imports would outpace domestic production, leading to an import requirement of about USD 300 billion by 2020
- This provides an excellent opportunity for investors to set up their manufacturing facilities in Tamil Nadu

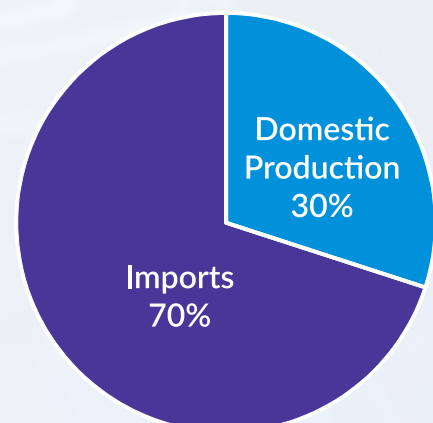
Source: Government of India

## Printed Circuit Boards (PCBs)

Estimated demand of PCBs in 2018-19 in India is worth USD 4.99 billion and is expected to cross USD 6 billion by 2019-20

Industry	Estimated PCB demand by 2019-20 (USD million)
Automotive	490
Mobile phones	723
Strategic electronics	570
Industrial electronics	924
Telecom	471
Consumer electronics	1670
Computer hardware	420
LED lighting	840
<b>Total</b>	<b>6108</b>

PCBs in India - Domestic production vs Imports



Source: Electronic Industries Association of India (ELCINA)

# The Tamil Nadu Advantage

Huge market of downstream industries such as automotive, mobile phones, computer hardware, industrial and strategic electronics, etc.

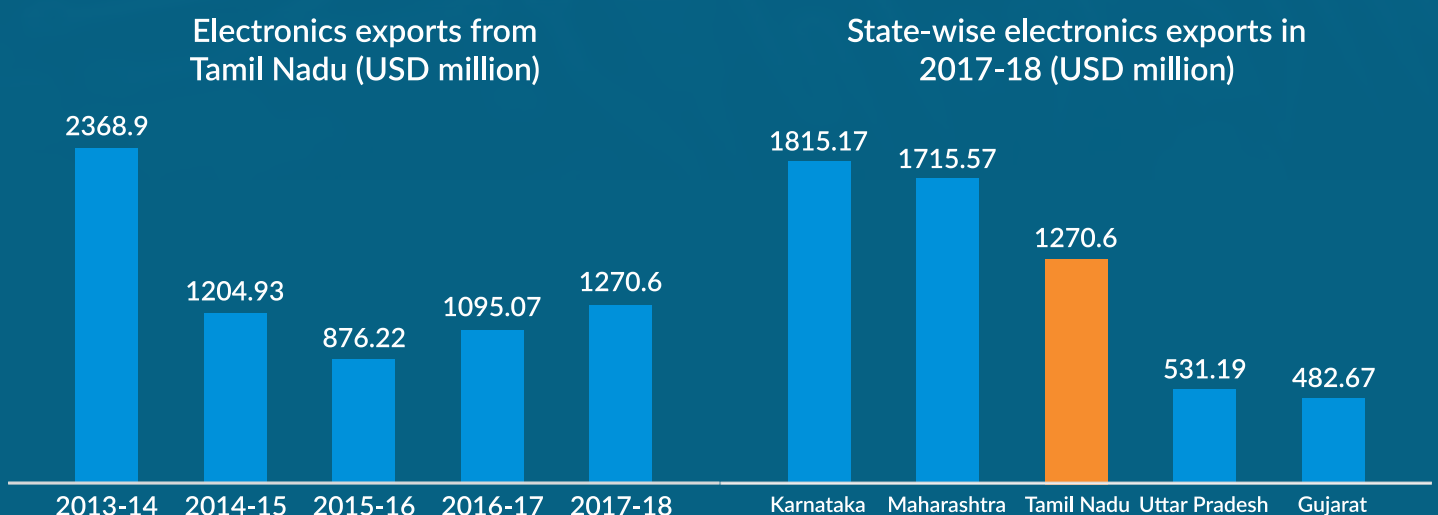
- Highest automobile & auto components production in India
- Huge smartphone market
- Huge consumer durables demand due to urban agglomeration
- Large number of computer literate people
- Defence corridor is expected to boost the strategic electronics market

- Existing and upcoming electronics manufacturing clusters
- Excellent airport and seaport logistics infrastructure

## Exports from Tamil Nadu

USD 1270.6 million

Electronics exports from Tamil Nadu in 2017-18



Telecom instruments (38% of the total electronics exports), electronic instruments (33%) and electronic components (11% ) were the top three exported commodities in the electronics sector from Tamil Nadu in 2017-18

## Growth Drivers

### Fast growing Global Market:

Global electronics manufacturing industry, at USD 1.75 trillion, is the fastest growing industry and is expected to reach USD 2.4 trillion by 2020

### Rising Domestic Demand:

Increase in demand for electronic goods in India due to rise in income levels leading to higher off-take of electronics products

### Digital India / Make in India:

Automation demands and rise in digital banking sector like wallet players, payment banks, VSAT-enabled mobile, ATMs & POS machines, etc.

### Adoption of latest technology:

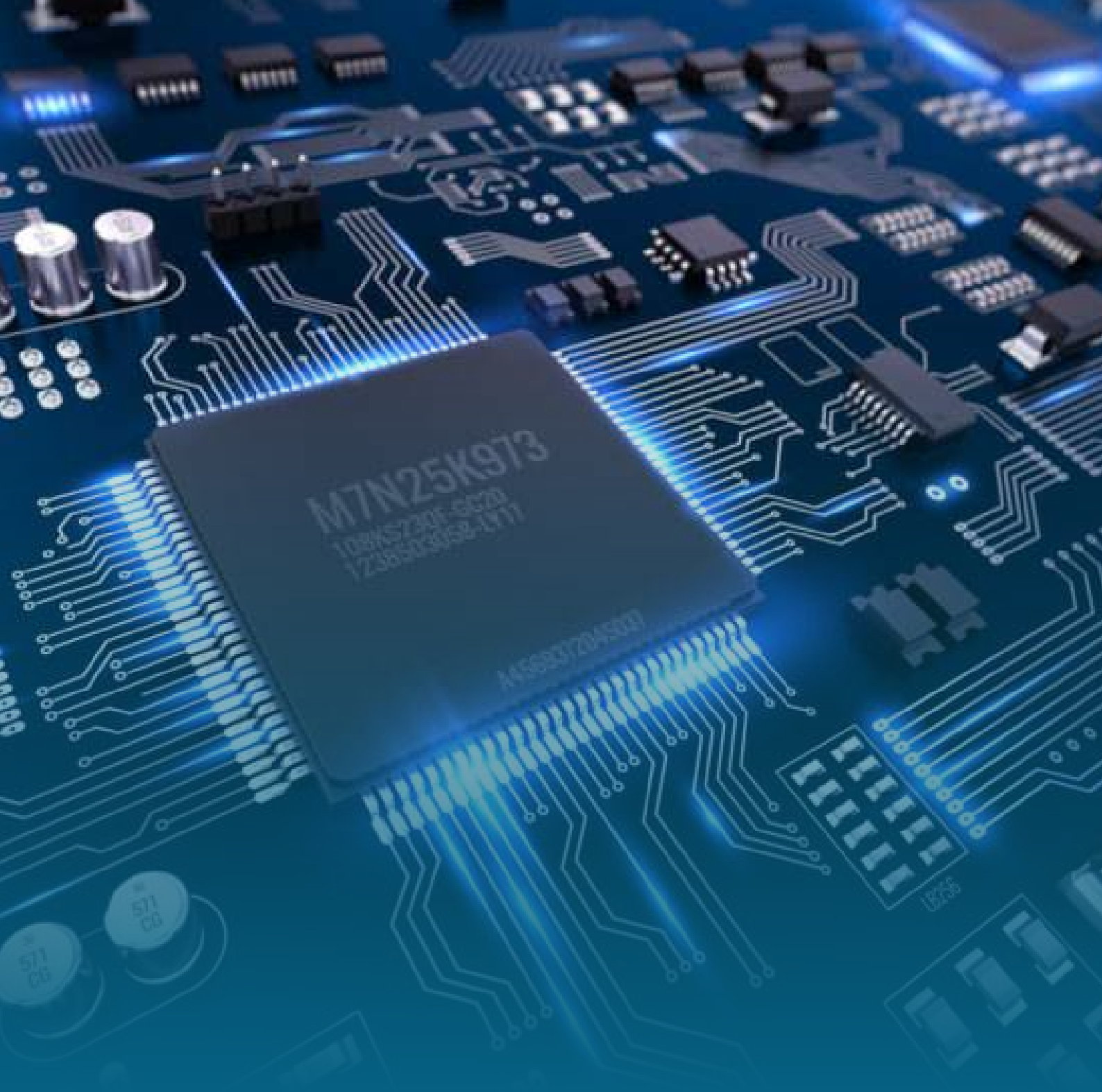
High speed communication network due to increasing data volume

Source: Gol (DeitY) Task Force Report on ESDM Sector, India Electronics & Semiconductor Association

## Major Players



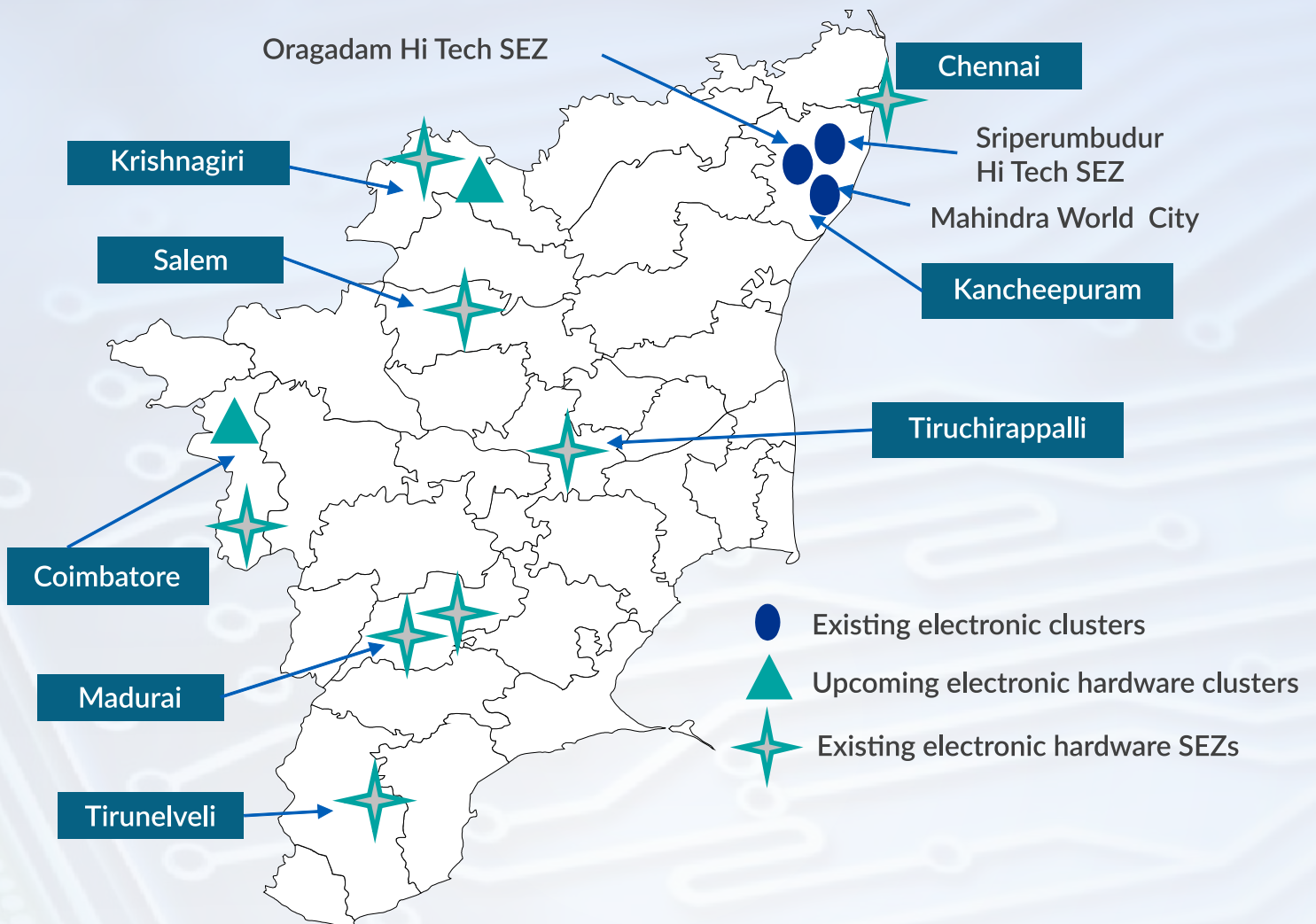




# Infrastructure **Support**

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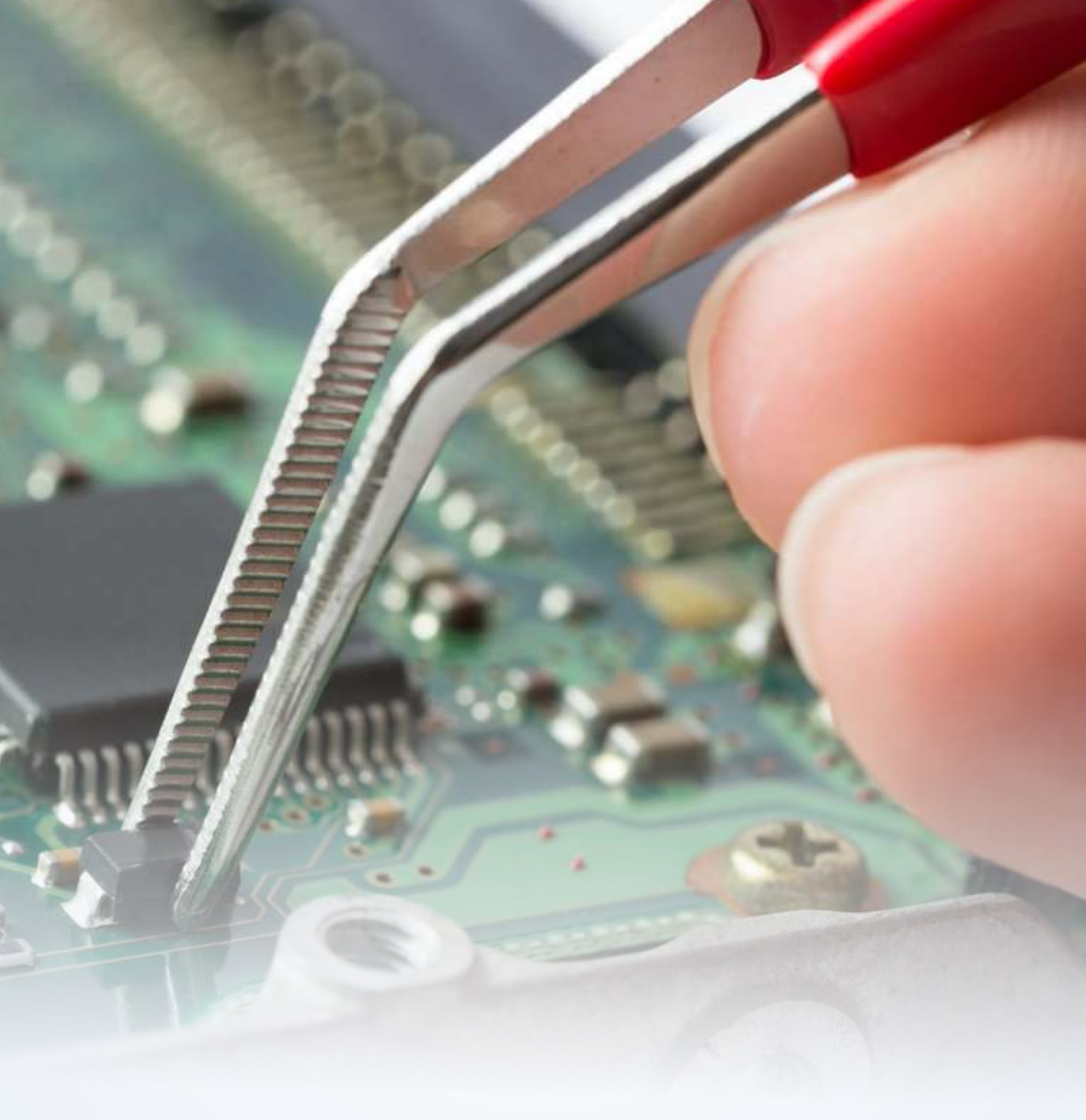
# Electronic Hardware SEZs and EMCs



## Infrastructure

- Presence of 20+ electronic hardware technology parks based in major IT centric SEZs of Sriperumbudur, Oragadam and Mahindra World City
- The Government of Tamil Nadu is planning to establish an electronic manufacturing cluster in Hosur, Krishnagiri
- Tamil Nadu Electronic Industries Association of India plans to establish an electronic manufacturing cluster in Coimbatore
- The state has set up an expert committee with representatives from the industry to evaluate the potential and advise the government on the way forward for improvement of infrastructure to attract more investments in hardware manufacturing

Source: Government of Tamil Nadu, IBEF



# Specific Opportunities

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## Investment opportunities

Automotive  
Electronics  
Manufacturing

Photovoltaic  
Panels  
Manufacturing

Medical  
Electronics  
Manufacturing

Telecom  
Products &  
Equipment  
Manufacturing

Consumer  
Electronics  
Manufacturing

# Government Policy Support

Category	Investment Range (INR crores) (Area wise)		
	A Districts (Chennai, Tiruvallur, Kancheepuram)	B Districts (Other than A & C)	C Districts (Southern districts)
Mega Projects	Above 500 - 1500 and creating an employment of 300 in 3 years	Above 350 - 1000 and creating an employment of 200 in 4 years	Above 200 - 500 and creating an employment of 100 in 4 years
Super Mega A	Above 1500 - 3000 and creating an employment of 400 in 5 years	Above 1000 - 2000 and creating an employment of 300 in 5 years	Above 500 - 1500 and creating an employment of 250 in 5 years
Super Mega B	Above 3000 - 5000 and creating an employment of 600 in 6 years	Above 2000 - 4000 and creating an employment of 400 in 6 years	Above 1500 - 3000 and creating an employment of 350 in 6 years
Ultra Mega	Above 5000 and creating an employment of 700 in 7 years	Above 4000 and creating an employment of 600 in 7 years	Above 3000 and creating an employment of 500 in 7 years

“Southern District” means the Districts of Theni, Dindigul, Madurai, Sivagangai, Ramanathapuram, Virudhunagar, Tirunelveli, Thoothukudi and Kanniyakumari

## Standard Incentives

### Capital Subsidy

- Subsidy ranging from INR 30 Lakhs to INR 2.25 crores
- 50% additional subsidy for industries set up in SIPCOT Industrial Parks (other than Southern districts)
- For investments made in B & C category districts, an additional 10% & 25% subsidy for industries located outside the SIPCOT Industrial Parks

### Stamp Duty Concession

- 50% to industries located in SIPCOT parks in A & B districts and 100% in the case of Southern Districts

### Environmental Promotion Infrastructure Subsidy

- Subsidy of INR 30 lakhs or 25% of Capital cost whichever is less
- Apart from the above, Industries adopting Zero Effluent or Waste Water Discharge, Clean Development Mechanism and Emissions Trading Mechanism will be given a higher amount of subsidy

### Electricity Tax Exemption

- Period of exemption depends upon the quantum of investment and the employment criteria prescribed

## Incentives for Industrial Promotion in Southern Districts

- Higher fiscal benefits
- SIPCOT will allot lands at 50% of the cost in its existing and new industrial parks
- SIPCOT will acquire & allot Land for new ventures in case SIPCOT industrial parks are not available
- 50% exemption from Stamp Duty for land privately purchased by investors; 100% exemption in case of units in SIPCOT industrial parks
- 25% additional back ended capital subsidy; linked to investment and employment in the case of industries located outside SIPCOT industrial parks

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## Investment Promotion Facilitators - Key Contacts

TN Industrial Guidance and Export Promotion Bureau  
19-A, Rukmani Lakshmipathy Road, Egmore, Chennai-600 008  
Phone: 91-44-2855 3118 Website: [www.investingintamilnadu.com](http://www.investingintamilnadu.com)

Tamil Nadu Industrial Development Corporation Limited (TIDCO)  
19-A, Rukmani Lakshmipathy Road, Egmore, Chennai-600 008  
Phone: 91-44-2855 4421  
E-mail: [cmd.tidco@nic.in](mailto:cmd.tidco@nic.in)  
Website: [www.tidco.com](http://www.tidco.com)

State Industries Promotion Corporation of Tamil Nadu (SIPCOT)  
19-A, Rukmani Lakshmipathy Road, Egmore, Chennai-600 008  
Phone: 91-44-2855 4787  
E-mail: [sipcot@md3.vsnl.net.in](mailto:sipcot@md3.vsnl.net.in)  
Website: [www.sipcot.c](http://www.sipcot.c)

Tamil Nadu Industrial Investment Corporation Limited (TIIC)  
New no: 692, Anna Salai, Nandanam, Chennai-600 035  
Phone: 91-44-2433 1203  
Fax: 91-44-2434 7209  
E-mail: [ho@tiic.in](mailto:ho@tiic.in)  
Website: [www.tiic.org](http://www.tiic.org)

Tamil Nadu Urban Infrastructure Financial Services Ltd.  
19, T P Scheme Road, Raja Muthaipuram, Ramakrishna Nagar.  
R A Puram Chennai – 600 028  
Phone: 91-44-24643103  
E-mail: [md@tnuifsl.com](mailto:md@tnuifsl.com)  
Website: [www.tnuifsl.com](http://www.tnuifsl.com)

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Website: [www.elcot.in](http://www.elcot.in)

Tamil Nadu Small Industries Development Corporation (TANSIDCO)  
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Website: [www.sidco.tn.nic.in](http://www.sidco.tn.nic.in)