

Electronics Industry in India

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Foreword

Along with strong Gross Domestic Product (GDP) growth, approximately one sixth of the world's population and a growing per capita income, India has been on the forefront of consumer demand. While demand has been increasing across all sectors, the demand for electronic products has registered significant growth over the last decade. The domestic Indian market for electronics hardware (electronic products and electronic components) is estimated to be USD 64 billion in Financial Year (FY) 2015-16.

The worldwide electronics industry was valued at approximately USD 1.86 trillion in 2015. Over the years, production bases have shifted from the US and the European Union (EU) to Asia, whose share in global production has increased to over 60%. However, India only represents 1.5% of the world's electronic hardware production.

In its current state, the major issue plaguing the Indian electronics hardware industry is that approximately 58% of the local demand for electronic products and components are being fulfilled by imports. Even amongst the items which are domestically manufactured, local value addition is very small. This discrepancy is mainly caused due to the inverted duty structure on hardware for electronics, the nascent components ecosystem in India, the high-cost of finance, infrastructure deficiency and India's proximity to developed production countries such as China, Taiwan, etc.

However, the Indian government has recently realized the potential of the electronics industry in terms of its importance to GDP growth and providing employment.

The National Policy on Electronics (NPE), Make in India and Digital India are significant steps towards supporting

the manufacture of electronics hardware in India. The NPE proposes the set-up of over 200 electronic manufacturing clusters. The government has showed its strong intention towards achieving zero dependency on imports for meeting the electronics hardware demand through policies such as the Modified Special Incentive Package Scheme (M-SIPS), Electronics Development Fund (EDF), Preferential Market Access (PMA), etc. These initiatives will facilitate growth in local manufacturing of electronics hardware over the coming years.



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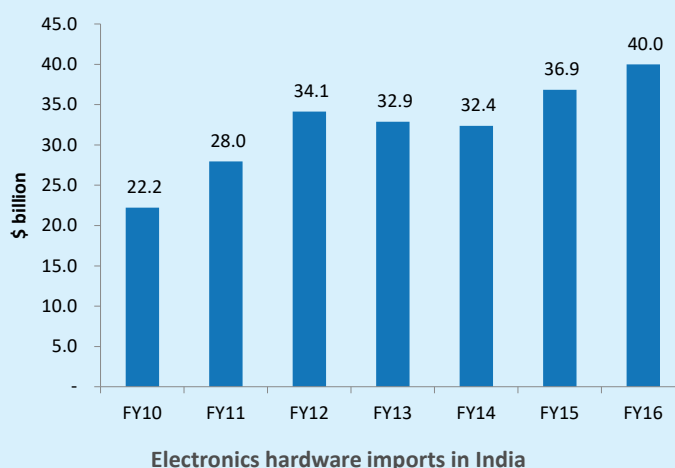
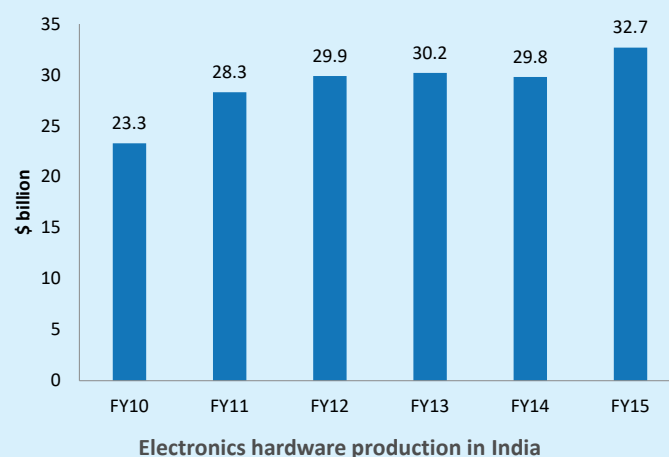
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Industry Overview

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Electronic hardware production in India has grown to approximately USD 33 billion in FY 2015-16 while, simultaneously, imports have increased considerably to USD 37 billion. India also exported electronic goods amounting to USD 6 billion. With favorable demand-side conditions, the Indian market is poised to grow considerably within the next 5-10 years. Realizing its potential for economic growth, the Government of India (GOI) had given a high priority to the manufacturing of electronics and IT hardware which has the potential to generate domestic wealth and employment, apart from enabling a cyber-secure ecosystem. In the past, efforts such as 100% Foreign Direct Investment (FDI) permitted under the automatic route, no industrial license requirement, payment of technical know-how fees and royalty for technology transfers have facilitated the rapid growth of the electronics hardware (including telecom) manufacturing sector.

However, these efforts did not fructify to their full potential; partly because India is a signatory to the Information Technology Agreement (ITA-1) which has resulted in a zero-duty regime on the import of goods covered under the agreement. India has also executed Free Trade Agreements (FTAs) and Preferential Trade Agreements (PTA) with several countries/trading blocks which enabled the zero-duty import of items not covered under the ITA. Other hampering factors include the lack of reliable power, high cost of finance, poor logistics and infrastructure, weak component manufacturing bases, lack of targeted and proactive R&D in collaboration with the industry, etc. However, with the advent of NPE, Make in India, Digital India and other initiatives, the GOI has shown its intent towards facilitating electronic manufacturing in India.



Source: SKP Analysis, ELCINA, Department of Commerce - Trade data

Highlights

Key sectors

Electronic products
Electronic components
Semiconductor design
Electronics manufacturing services

In FY 2015, the market size for electronics hardware in India was approximately USD 64 billion. 42% of this market was met by domestic production

The top ten products contributing to about 70% of industry revenue are cell phones, flat panel TVs, notebooks, desktops, digital cameras, inverters and Uninterruptible Power Supply (UPS); memory cards and USB drivers; 4W EMS, LCD monitors and servers

By 2020, the semiconductor design market in India is expected to increase with a CAGR of 29.4% from USD 14.5 billion to USD 52.58 billion

100% FDI is allowed under the automatic route in ESDM subject to all the applicable regulations and laws

Electronic items are among the top three imports by value in India. India imported products due to the current demand for Electronic System Design and Manufacturing (ESDM) products. 58% of the demand is being met by imports

The government approved 74 investment proposals amounting to INR 173 billion out of the 194 proposals entailing investment of INR 1.21 trillion under M-SIPS as on May 2016

Government estimated electronics market by 2020 for major segments: Telecom (USD 34 bn); Laptops, desktops, tablets (USD 34 bn); LEDs (USD 35 bn); Consumer electronics (USD 29 bn); Set-top boxes (USD 10 bn)

The government has announced a scheme to enhance the number of PhDs in the electronics sector to 1,500 per annum by 2017-18

Under the modified SIPS: Capital subsidy up to 20-25% for 10 years on capex; in addition to the NPE, a number of state governments have also defined policies for electronics

The NPE's objective is to achieve a turnover of USD 400 billion by 2020 which involves an investment of approximately USD 100 billion and employment to 28 million

Demand Drivers

Rise in per capita income

In the last couple of years, the per capita income in India has been growing at 7.5% per annum. The increasing trend of working women is also driving demand for home appliances such as washing machines.

Replacement and upgrade demand

With fast-paced technological changes, product life cycles have shortened considerably and new products with upgraded technology are launched in the market within a short amount of time. Also, changing customer attitude, exchange offers by sellers and the emergence of used-product websites like Olx and Quikr has made it easy for customers to replace their existing goods with newer products.

Government initiatives

GoI initiatives such as Digital India, Smart Cities and the National Knowledge Network will be major demand boosters for electronics products. At the same time, initiatives such as Make in India and Preferential Market Access are set to boost the demand for electronic components.

Rise and adoption of online purchase

The rise of large e-commerce companies like Flipkart, Amazon, Snapdeal, etc. have led customers to buy electronic products online, especially on mobile devices. Some brands are even exclusively launching their products on these platforms. It also reduces marketing costs for products with a huge customer base as these sites act as a marketing medium for brands.

Increasing penetration in rural market

Out of the total households in India, 70% belong to the rural market. This market has traditionally been under-penetrated due to infrastructural issues such as electricity and road connectivity. With increasing electrification and infrastructure development, this market has become a new frontier for electronic brands.

Decrease in the price of electronic goods

With technological progress, the prices of entry-level electronic goods have come down drastically in recent times. Items such as smartphones and televisions have been following a trend of continuous price reductions. Sellers are also providing easy financing for relatively expensive electronic goods.



Recent Initiatives

Make in India

The government has cleared 74 investment proposals worth INR 173 billion in the electronics manufacturing sector out of 195 proposals entailing investments worth INR 1.21 trillion under M-SIPS till May 2015. The majority of the remaining proposals are under appraisal. This increased investment is attributed to the 'Make in India' campaign.

Solar power and LED distribution

The Solar Energy Corporation of India Ltd has taken a major initiative, namely, 'The Jawaharlal Nehru National Solar Mission'. The mission has set the ambitious target of deploying 20,000 MW of grid connected solar power by 2022 and aims at reducing the cost of solar power generation in the country through (i) long-term policy; (ii) large-scale deployment goals; (iii) aggressive R&D; and (iv) domestic production of critical raw materials, components and products. As part of its effort towards energy saving, the government distributed more than 111 million LED bulbs as on May 2016.

Smart Cities

The Smart Cities mission is an urban renewal and retrofitting program by the GoI with a mission to develop 100 cities across the country, making them citizen-friendly and sustainable. The Union Ministry of Urban Development is responsible for implementing the mission in collaboration with the state governments of the respective cities. The vision is to develop 100 smart cities as satellite towns of larger cities and by modernizing the existing mid-sized cities.

Digital India

The Digital India program is a flagship program of the GoI with a vision to transform India into a digitally empowered society and knowledge-based economy. Digital India aims to provide a much-needed thrust to the nine pillars of growth areas, which are:

1. Broadband highways
2. Universal access to phones
3. Public internet access program
4. e-Governance
5. e-Kranti - Electronic delivery of government service information for all
6. Information to all
7. Electronics manufacturing
8. IT for jobs
9. Early harvest programs

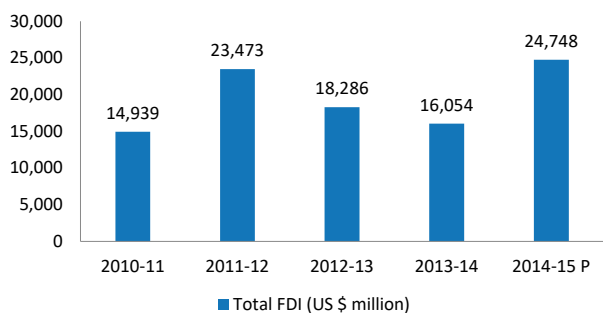
Under pillar 7, the GoI has targeted NET ZERO imports of electronics. Through pillar 5, the GoI intends to bring technology into all aspects of a society like education (e.g. schools connected with broadband and free wifi), financial inclusion (e.g. mobile banking, micro-ATM programs) and agriculture (e.g. real-time price information).

National Knowledge Network

In March 2010, the government approved the establishment of the National Knowledge Network (NKN) at an outlay of INR 59.9 billion, to be implemented by the Network Interface Controller (NIC) over a period of 10 years. The objective of the NKN is to connect all knowledge institutions across the country through a high-speed data communication network to encourage the sharing of resources and collaborative research. This would cover about 1500 institutions comprising all universities, institutions of higher learning and research.

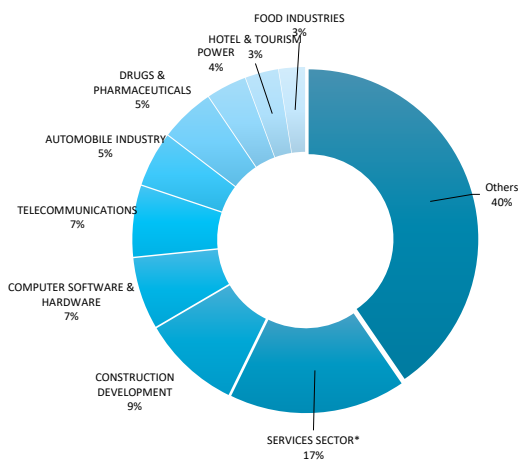
Foreign Direct Investment

Total FDI – All sectors (USD million)



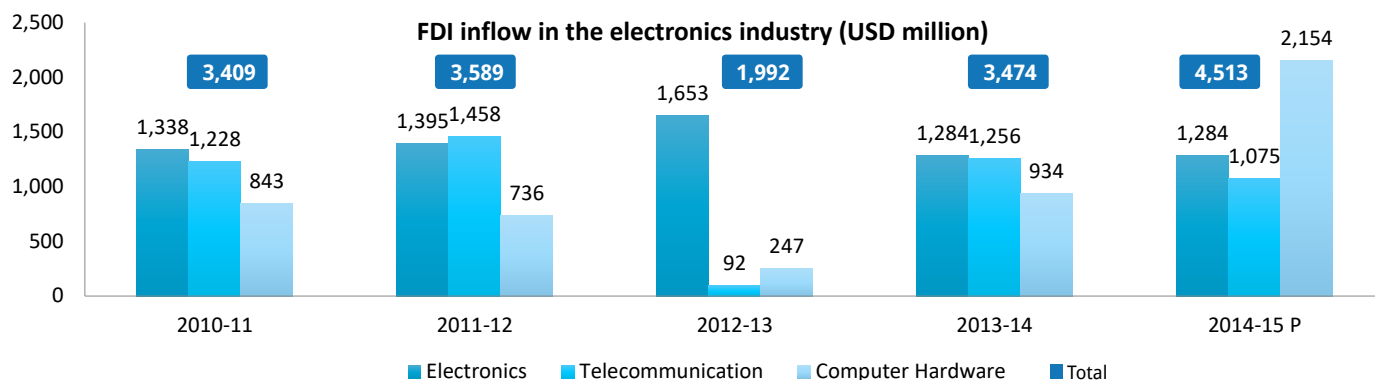
Source: Reserve Bank of India

Sector-wise FDI (Jan 2000-Jan 2015)



Source: Reserve Bank of India

FDI inflow in the electronics industry (USD million)



Source: Reserve Bank of India

Competitive Forces within the Industry

Threat of new entrants: **Medium**

- Threat from domestic manufacturers is low due to the capital-intensive nature of the industry
- New players based out of China and Taiwan are consistently entering India (especially in the mobile devices segment)
- E-commerce is making it easy to build a brand and also functions as a sale platform

Bargaining power of customers: **High**

- Many substitute products are available
- Availability of both online and brick and mortar sales channels
- Buyers possess considerable product information which helps in comparison

Competitive rivalry: **High**

- A large number of players are vying for market share
- Established players are trying to protect their market share with aggressive pricing and marketing schemes
- Newer players are diversifying their product portfolio

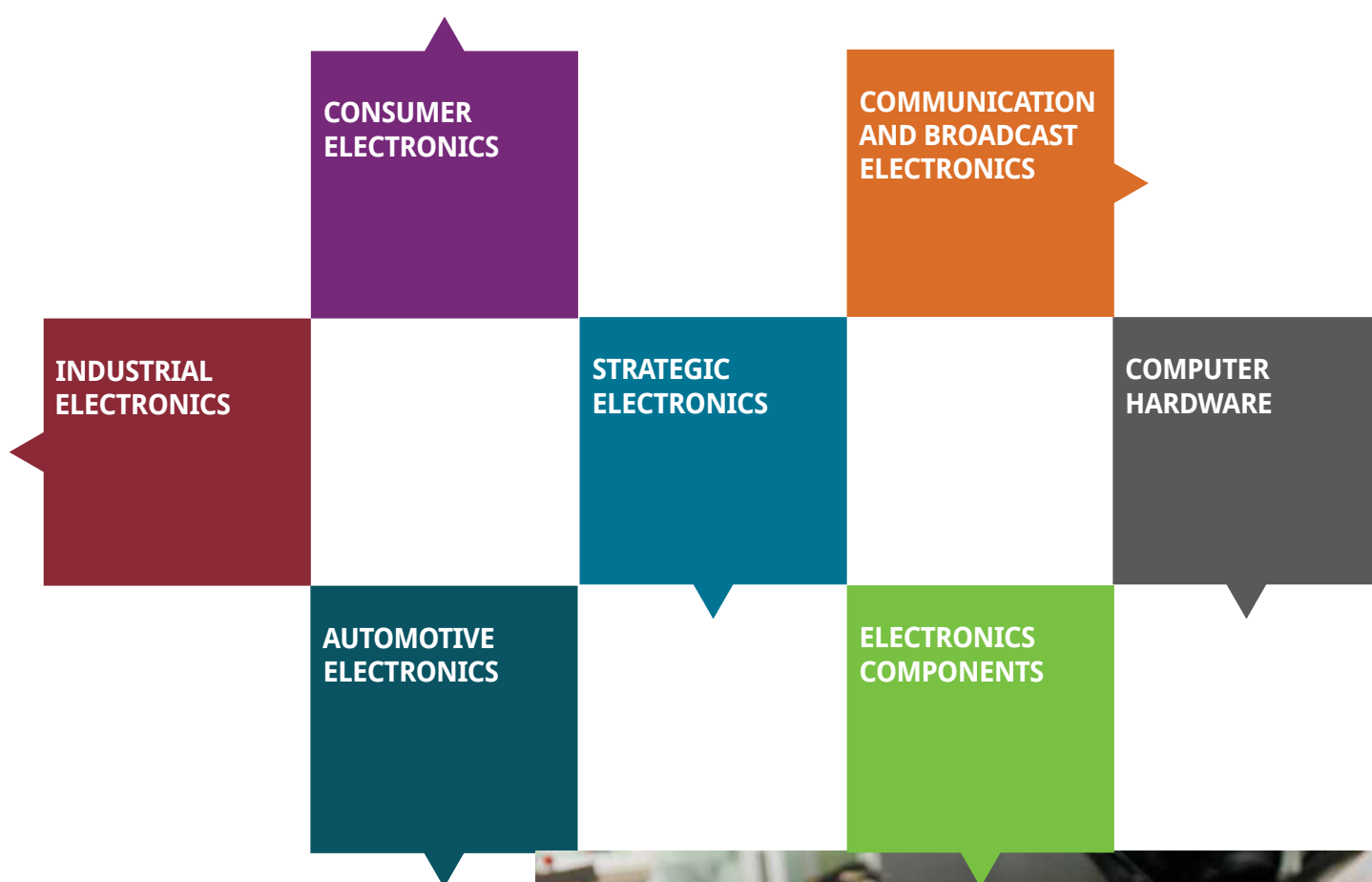
Bargaining power of suppliers: **Low**

- Product differentiation is minor at the component level
- Domestic component makers face tough competition from neighbouring countries such as China, Taiwan, Malaysia, etc.
- Low costs for switching Original Equipment Manufacturers (OEMs)

Substitute products: **Low**

- No substitute for electronics
- The industry faces internal substitution due to constant innovation within the industry; the product life cycle has reduced considerably

Key segments and trends



Consumer Electronics

- Increased penetration of online and organized retail and affordability due to price reduction.
- Expansion into new segments such as High-Definition Televisions (HDTVs), tablets and smartphones.
- The government stopped duty-free import as baggage and imposed a 36.5% duty on the same in 2013-14.

Industrial Electronics

- Growing application of state-of-the-art systems such as decision analysis, 3D coordinate systems, smart image processing, nanotechnology, nano-scale assemblies, etc. across various sections of the industry.

Computer Hardware

- India is one of the fastest growing IT systems and hardware markets in the Asia-Pacific region.
- Expansion of server markets to smaller cities and small and medium businesses.

Automobile Electronics

- The automobile industry is entering a new age of electronics with new safety and connectivity system solutions which will give a boost to 'pervasion' (i.e. increasing the penetration rate of electronics in automobiles).
- There is an increased demand from public authorities to improve energy saving, control pollution and enhance road safety which can be satisfied only by electronic solutions.
- The new vehicle generations have rapidly growing electronic content as recent security and comfort equipment is becoming a common amongst mid-range and lower-end vehicles.

Communication and Broadcast Electronics

- Growing broadband subscriber base.
- As on 30 April 2015, the total gross telephones subscribers in the country were 999.71 million covering 973.35 million wireless subscribers and 26.36 million wire line subscribers respectively.

Strategic Electronics

- India's defence industry has grown at an average rate of 13.4% per year during the 11th five-year plan and is poised for more substantial growth.
- Economic growth and low costs are likely to provide an impetus to the aerospace market.

Electronic Components

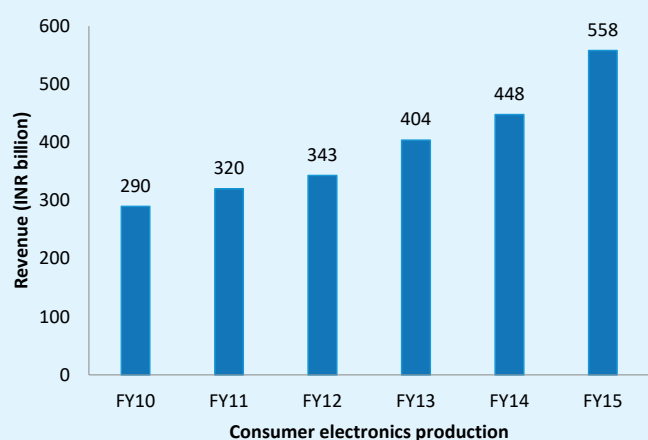
- Proliferation of wireless communication equipment and data networking infrastructure fuels demand for multilayer printed wiring boards.
- Electronic connectors continue to grow in prominence in the telecommunication and data communication sector.

KEY SEGMENTS

Consumer Electronics

MAJOR PRODUCTS

- TVs (CRT and FPD)
- DVD players
- Set-top boxes
- Home theater systems
- MP3 players
- Audio equipment
- Digital cameras
- Household appliances



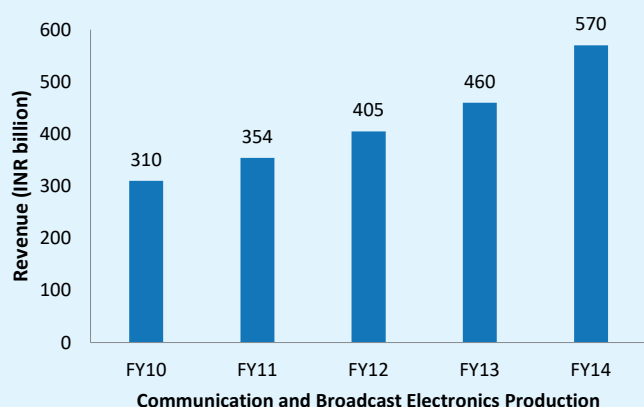
- The consumer electronics industry has been witnessing a sustained increase in demand as the market is still underpenetrated.
- The consumer electronics sub-sector accounts for more than a quarter of the total electronics production in India. It includes TV sets, video players and set-top boxes among others.
- The overall production of this segment of the electronic industry was INR 475.99 billion in 2013-14 and grew at 17.24% to over INR 558.06 billion in 2014-15.
- The growth in consumer electronics over the years has been accompanied by an increase in imports with respect to certain items like LCD/LED TVs. The government accordingly stopped their duty-free import as baggage and imposed duty at 36.5% on the same in 2013-14.
- In contrast to the LCD/LED segment, the conventional TV (with picture tube) continued to register negative growth with production declining from 4.5 million in 2013-14 to 3.5 million in 2014-15. Similarly, the production of DVD players has also continued to decline due to the rapid growth of the DTH sector, digitalization of the cable TV network and the use of set-top boxes. Growth in the public address systems came down to 5% in 2014-15 from 10% in the previous year.

KEY SEGMENTS

Communication and Broadcasting

MAJOR PRODUCTS

- Fixed-line telecommunication equipment
- Mobile telecommunication equipment
- Modems
- Routers
- Switches
- IP PBX
- BTS (GSM, CDMA)
- WiMax (BTS,CPE)
- PON/GPON ONT/OLT
- DWDM



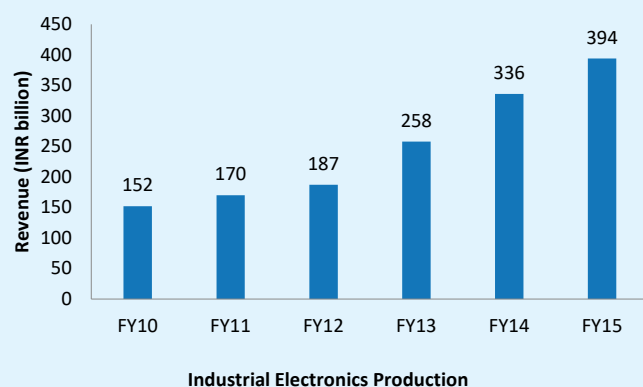
- The quick development of India's Information and Communication Technology (ICT) sector has resulted in an increase in the production of communication and broadcasting equipment. Communication & Broadcasting (C&B), along with the consumer electronics sub-sectors, together account for about half of the electronics output.
- From 2009-2013, the production of the sub-sector expanded at a CAGR of 16.4% and the estimated value of production for mobile phones (as per the ICA – Indian Cellular Association) for 2014-15 was INR 189 billion against INR 266.5 billion in 2013-14, (a negative growth of approximately 29%).
- With the drop in production activity during 2014-15, there was a substantial reduction in the number of exports of mobile handsets compared to the preceding years. In 2014-15, the number of mobile handsets exported declined to 14 million units compared to 72.5 million units during 2013-14, thereby showing a negative growth rate of approximately 81%.
- As per ICA estimates, at its peak, India was producing approximately 155 million units of mobile handsets in 2011-12 whereas domestic demand stood at nearly 180-200 million units during that period. To further amplify this, almost 85% of the domestic demand was produced locally. However, the production activity had reduced with Nokia closing down its manufacturing facility in 2014-15. During 2014-15, the production of mobile handsets was only 58 million units compared to 130 million units in 2013-14. After the government made mobile phone imports 11.5% more expensive in last year's budget, local manufacturing activity led by Foxconn has picked up pace.

KEY SEGMENTS

Industrial Electronics

MAJOR PRODUCTS

- Power electronics
- LED lighting
- Compact Fluorescent Lamp (CFL)
- Energy meters
- UPS
- Inverters
- Weighing scales and power supplies



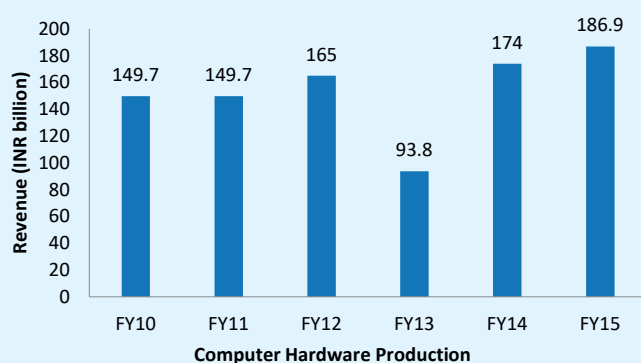
- Industrial electronics contributed to approximately 21% of the total output of the electronics goods industry in FY 2015.
- The industrial electronics sector is closely linked to investments taking place in infrastructure including the power sector. Process control equipment, industrial control systems, testing and measurement devices, power electronics, automated/automation equipment and analytical instruments are some of the key segments of this industry.
- The domestic demand in this sector is catered to by the local manufacturing, whereas about 10% of the more sophisticated products are imported. The total production of industrial electronics during 2014-15 was estimated at INR 393.74 billion against INR 336 billion during 2013-14 showing a growth of about 17.18%.
- Companies in this sector are applying state-of-the-art systems such as decision analysis, 3D coordinate systems, smart image processing, nanotechnology, nanoscale assemblies, etc. across various sections of the industry.
- A recent trend in this sector is the introduction of robotics to manage processes and equipment for sensitive industries such as the chemical industry, nuclear power generation, etc. Artificial intelligence has also been made available which would help the industrial electronics sector improve its quality control, thereby making it more efficient.

KEY SEGMENTS

Computer Hardware

MAJOR PRODUCTS

- Desktops
- Notebooks
- Tablets
- Monitors
- Servers, storage flash memory cards, USB drives and printers/Multi-Function Devices (MFDs)



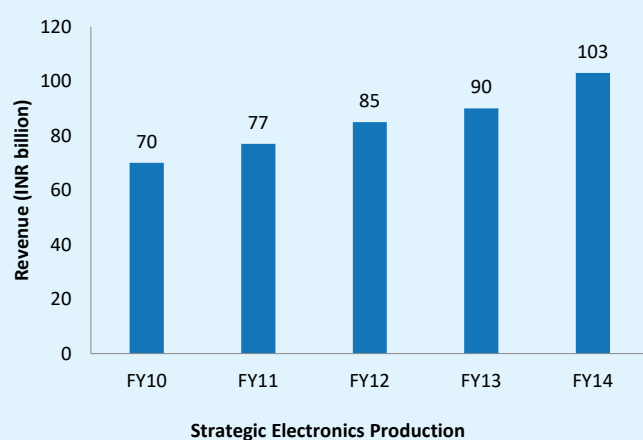
- The computer hardware industry in India has been undergoing a change in its product composition. The production of notebooks registered a 17% growth and increased from INR 90.1 billion in 2013-14 to INR 105.4 billion in 2014-15. Production of tablets also registered a robust growth rate of 27% and increased from INR 11.26 billion in 2013-14 to INR 14.30 billion in 2014-15. In contrast, the production of desktop PCs registered a negative growth of 16%, and fell from INR 43.09 billion in 2013-14 to 36.19 billion in 2014-15.
- The value of production arrived by aggregating the different segments falling under the category of computers and peripherals amounted to INR 186.91 billion in 2014-15 (as per estimates by the Manufactures' Association for Information Technology (MAIT)), against INR 174.84 billion in 2013-14, thereby registering a growth of approximately 6.9%.
- The PC market (which includes desktops and notebooks) in the country declined for the first time to 10.6 million units, falling over 10% on account of the growing consumer preference for smartphones and tablets.
- Printer sales have grown by a small margin of 1.7% and current sales amount to 3.15 million units during FY 2015 as compared to the last fiscal year.
- The server market has witnessed strong growth in FY 2015. Sales have increased by 30% over the last financial year and stood at 182,727 units in the current year.

KEY SEGMENTS

Strategic Electronics

MAJOR PRODUCTS

- Military communication systems
- Radars and sonars
- Network centric systems
- Electronic warfare systems
- Weapon systems
- Satellite based communication
- Navigation and surveillance systems
- Navigational aids
- Underwater electronic systems
- Infrared based detection and ranging systems
- Disaster management systems and internal security systems



- The Indian strategic electronic industry is dominated by Bharat Electronics Limited (BEL) and has some contribution from Defence Public Sector Undertakings (DPSUs) such as Hindustan Aeronautics Limited, the Electronics Corporation of India Limited and Bharat Dynamics Ltd. More recently, a few domestic small and medium scale companies have emerged as they have the capability to absorb technology and meet the stringent requirements of strategic equipment. The Indian defence electronics industry has been growing at an average rate of about 13.4% per year during the 11th plan period. The role of IT in defence is expanding with a new focus on cyber security. A few small and medium scale companies provide EMS (Engine Management System) services and meet critical supply requirements of multinational companies as well as DPSUs.
- The next decade is likely to see an exponential growth in combat systems as well as non-platform based strategic defense electronic programs.
- The estimated production for this segment for 2014-15 was INR 157 billion against INR 138 billion in 2013-14, and showcased a growth of approximately 13.77%.

KEY SEGMENTS

Automotive Electronics

MAJOR PRODUCTS

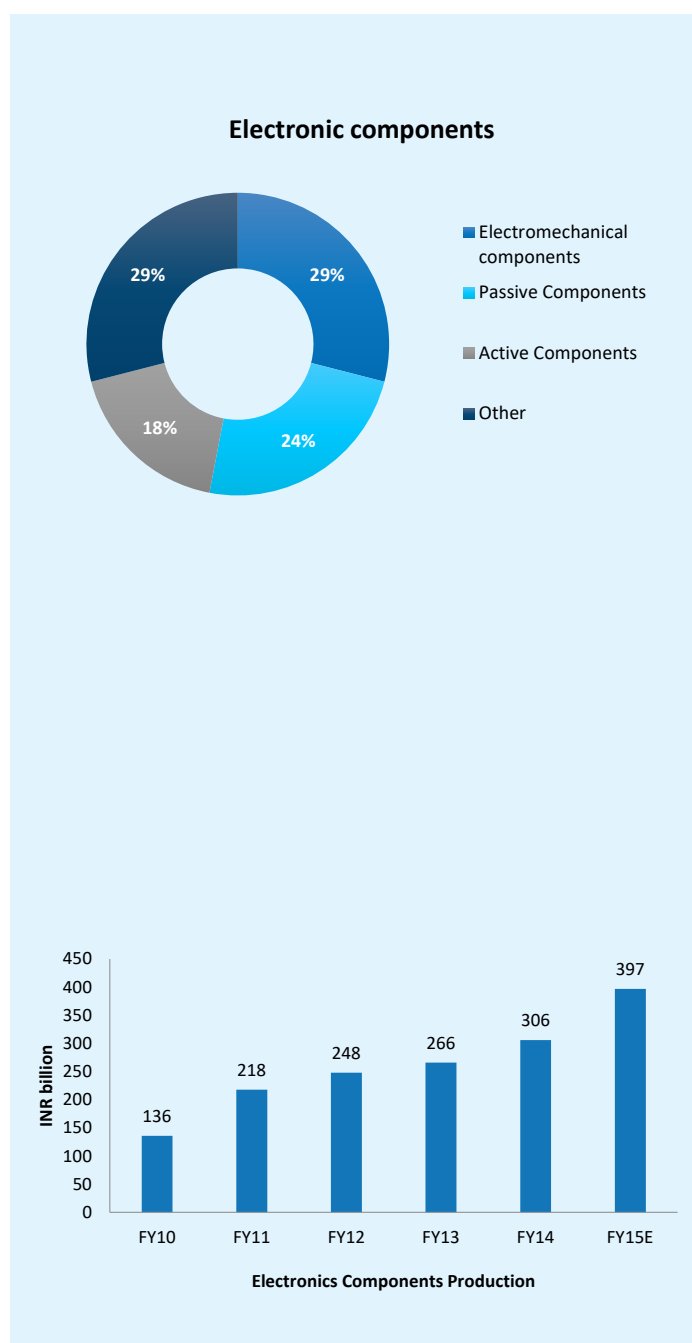
- Electric vehicles
- Power windows
- Anti-brake locking systems
- Remote keyless entry
- Two-wheeler (2W) ignition units
- Flashers
- Regulators
- Instrument clusters (2W,4W)
- Engine management systems (4W) and car radios

- With the strong growth in the automobile industry and the increasing digitization of automobile controls, automotive electronics has become an important segment of the industry. The production of the automotive electronics sector (according to data from Gartner) is estimated to be INR 72.78 billion in 2013-14 compared to INR 56.29 billion in 2012-13, exhibiting a growth of 29%.
- Modern cars are already packed with electronics and have the highest density of electronic components compared to other consumer machines. Currently, cars are powered by multiple technologies which fall into three main categories: safety and security, infotainment and telematics, and powertrain (engine and transmission, including other ancillary components) fuel economy.
- The Indian auto component industry is expected to register a turnover of USD 66 billion by FY 15-16 with a likelihood of reaching USD 115 billion by FY 2020-21 depending on favorable conditions*. In addition, industry exports are projected to reach USD 12 billion by FY 15-16 and USD 30 billion by FY 2020-21.
- Also, the annual market for passenger cars, which is currently 2 million, is expected to reach 5 million by 2020. Car makers are competing to bring in advanced features, connectivity and entertainment, advanced safety and improved fuel efficiency to their products to attract potential buyers.
- To address this ever-increasing list of consumer needs, more and more technological advancements will occur and automotive electronics will play a crucial role in satisfying user requirements. This will facilitate the development of complex electronic systems. Providing cost competitive electronic solutions is a significant challenge and also an exciting opportunity for Indian automotive companies.

*As per the estimates of Automotive Component Manufacturers Association of India (ACMA)

KEY SEGMENTS

Electronic Components

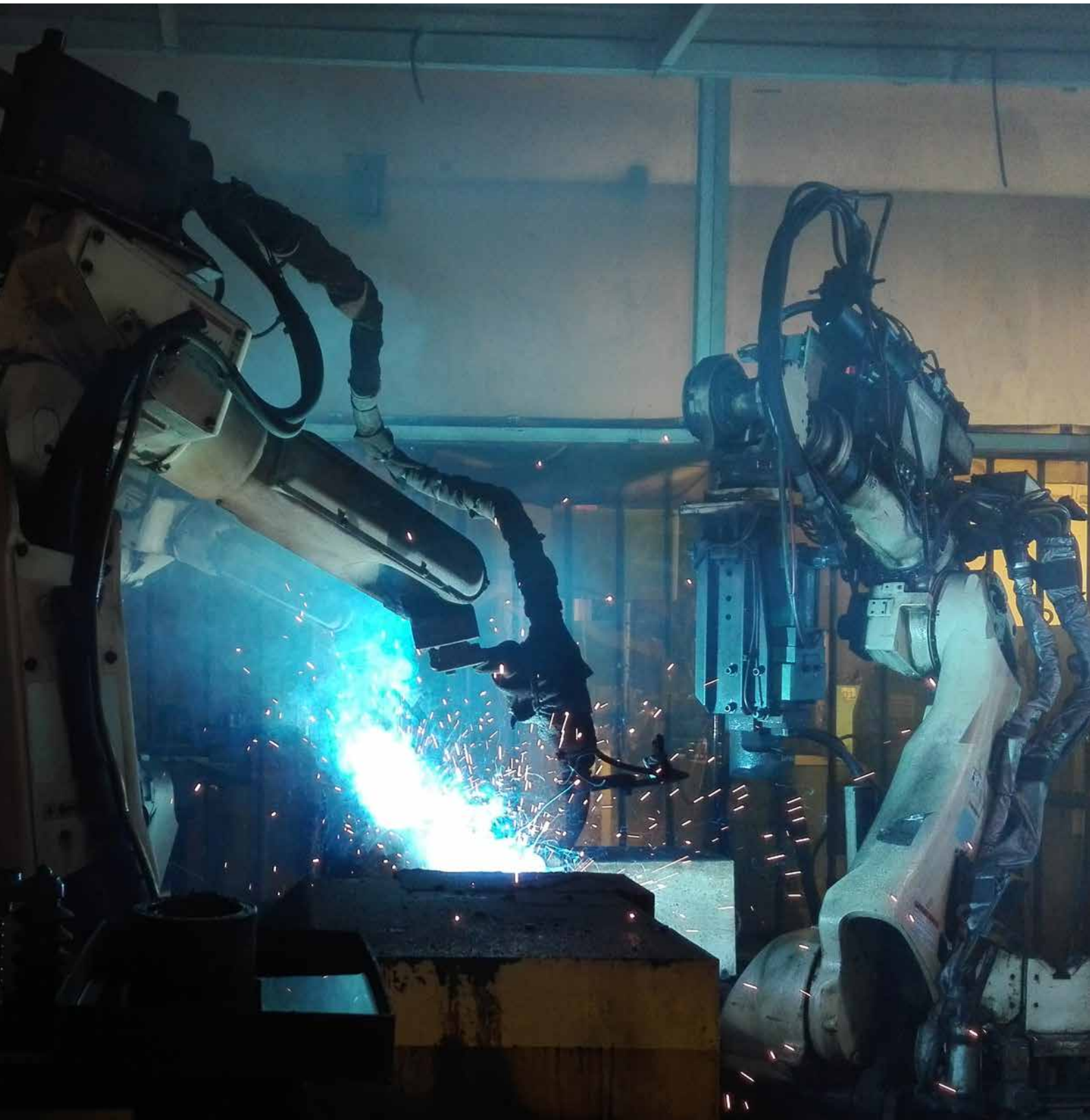


The demand for electronic components exceeded USD 14 billion during financial year 2013-14 and is estimated to have grown by about 15% to cross USD 16 billion in 2014-15. The estimated production figure for this segment during 2014-15 was INR 397.23 billion (excluding LED) as against INR 321 billion in 2013-14, showing a growth of about 23.74%.

Rapid growth in the domestic manufacturing of electronic components is vital for supporting growth in electronics manufacturing. The emerging growth areas for domestic manufacturing are LED lighting, automotive electronics, energy meters, solar energy and IT products such as tablets. These products are now driving the growth of electronic component manufacturing. These products are an addition to the existing segments such as telecommunications, consumer electronics and industrial electronics.

The Indian electronic component market is dominated by components like electromechanical components (relays, switches, etc.), which account for 29% and passive components (capacitors, resistors, etc.) which account for 24% of the total market share. Furthermore, active components (Integrated Circuits (ICs), diodes, transistors, etc.) and associated components (optical discs, magnets, radio frequency tuners, etc.) constitute 18% and 29% of components respectively. While the industry composition is not predicted to change substantially, there is a rapid decline in products such as Cathode Ray Picture Tubes and CD/DVDs which had, till recently, constituted a significant share of the manufacturing base and market. This is an outcome of advancing technology and consumer preferences. Consumer durables and telecommunications account for about 60% of the demand for electronic components in India. This is followed by IT and office automation and automotive industries which contribute 22%. Other application industries like industrial electronics, medical electronics, strategic electronics and the lighting industry account for the remaining market share.

Source: DeITY, ELCINA



Government Initiatives

FDI Policy

- 100% Foreign Direct Investment (FDI) is allowed under the automatic route in the ESDM sector, subject to all applicable regulations and laws.
- In case of electronics items for defence, FDI up to 49% is allowed under the government approval route, whereas anything above 49% is allowed through the approval of the Cabinet Committee on Security.

National Policy On Electronics (NPE)

- The NPE's vision is to create a globally competitive ESDM industry to meet the country's needs and serve the international market.
- The objective is to build an ecosystem for a globally competitive ESDM sector in the country by attracting investments of USD 100 billion and generating employment for 28 million people at various levels.
- The ultimate aim of the policy is to develop core competencies in strategic and core infrastructure sectors like telecommunications, automobiles, avionics, industrial, medical, solar, information and broadcasting, railways, intelligent transport systems, etc.
- The strategy for achieving these objectives involves fiscal incentives across the value chain through M-SIPS, facilitating the set-up of semiconductor fabrication facilities, preference for domestically manufactured electronic products in government procurements and incentives for setting up and upgrading EMCs among other initiatives.
- Other important policies include the National Telecom Policy and the National Manufacturing Policy.

Modified Sips (M-SIPS)

- Capital subsidy up to 20-25% for 10 years on capital expenditure (capex).
- Reimbursement of CVD/excise for capital equipment in non-SEZ units.
- Reimbursement of central taxes and duties for 10 years in select high-tech units like Fabrication and Automated Training Management Program (ATMPs).
- Available for the entire value chain of identified electronics products.
- Incentives available for 10 years from the date of approval.

Export incentives (Merchandise Exports from India Scheme (MEIS))

- The government has unveiled a five-year plan for increasing India's exports in a policy that seeks to make the country a big player in global trade by doubling overseas sales to USD 900 billion by 2019-20 while simultaneously giving a boost to the Make in India initiative.
- The government has extended duty incentives to a large number of products, including electronics, to increase the competitiveness of Indian exports and boost shipments.
- Most electronic products are provided with a 2% duty credit scrip and some with a 5% duty credit scrip.

Electronic Manufacturing Clusters (EMCs)

- Subsidy of 50-75% of project cost - up to USD 10 million per 100 acres of land for developing EMCs.
- Applicable to both greenfield and brownfield projects.
- Ready infrastructure including roads, power, water, testing facilities and social infrastructure.

Preferential market access

- Preference to domestically manufactured electronics goods in government procurement.
- Extent of government procurement from domestic manufacturers will not be less than 30% of the total procurement.

Electronics Development Funds (EDF)

- Fund of funds to promote innovation, intellectual property and R&D, product commercialization, etc. in ESDM, nano-electronics and IT sectors to participate in professionally managed 'Daughter Funds' of USD 20 million-100 million.
- These Daughter Funds in turn will provide risk capital to companies developing new technologies in the area of electronics, nano-electronics and IT.
- Each fund will have a government share of 25%-75% and the remaining will be from private and financial institutions.

Areas-based incentives

- Incentives for units in an SEZ/NIMZ as specified in respective state-specific Acts or the setting up of projects in special areas such as the north-east, Jammu and Kashmir, Himachal Pradesh and Uttarakhand.
- National Scheme for supporting MSMEs in the ESDM sector.
- For compliance of electronic goods with Indian standards, both testing and certification are required for exports.
- Development of EMCs by MSMEs.

State incentives

- A number of state governments have also defined policies in electronics (Maharashtra, Karnataka, Tamil Nadu, Chhattisgarh, Andhra Pradesh, Gujrat, West Bengal, Uttar Pradesh, etc.).
- Incentives such as interest subsidy, power tariff subsidy, exemptions on electricity duty, stamp duty, VAT subsidy, etc. are provided by states as per their respective policies.

Safety standards

- For curbing the inflow of sub-standard goods into the country, a scheme introducing safety standards for electronic goods has been approved through the Electronics and IT Goods (Requirements for Compulsory Registration) Order, 2012 and the same has been notified on 3 October 2012. This scheme introduces a new paradigm for ensuring quality electronic goods in the country and enhanced safety of consumers.
- DeITY notified this scheme mandating fifteen categories of electronics items under the Compulsory Registration Scheme of the Department of Consumer Affairs based on their compliance to Indian safety standards.

Industry recommendations

Reduce duties on components and raw-materials

All imports (in terms of raw materials, components, parts, consumables, sub-assemblies and capital goods) which will be used for the manufacture of electronic components should be permitted without the payment of any duty/taxes (zero duty on all inputs for the manufacture of electronic components and parts).

Remove inverted duty structure

All input tariffs should be brought down to tariffs applicable to final products. Exports should be subjected to zero taxes: All tariffs and domestic taxes paid should be rebated at the exit point.

The CVD equivalent to all domestic indirect taxes should be imposed on imports.

Incentivize domestic value addition and component manufacturing

M-SIPS should be expanded to incentivize and support local component manufacturing and domestic value addition. Component manufacturing should be provided with priority sector treatment and sops such as duty benefits and tax exceptions should be provided.

Infrastructure improvement

The government may set up buildings and facilities in specially constructed zones which can be taken on rent by SMEs. This will support their cost structure as the current high cost of land and construction is a limiting factor for them.

The government may consider creating incubators and parks focused on priority sectors, for example, healthcare.

Improve ease of doing business

According to the World Bank's Doing Business Report 2017, India ranks 155th in starting a business, 172nd in paying taxes, 143rd in trading across borders and 136th in resolving insolvency.

The industry expects improvement in procedures, regulatory and custom approvals, and refunds and clearances.

As far as the labor scenario is concerned, the government should consider relaxing restrictions on overtime work and allow women employees to work in night shifts in manufacturing sectors without compromising on health and safety.

Incentivize exports and give 'deemed export' status

The status of deemed export should be granted to products/components manufactured and sold in India.

The government may consider providing tax breaks for domestically manufactured products and merging the benefits in Domestic Tariff Area (DTA).

Investment incentives

A 10 year tax holiday should be provided for a firm that invests a substantial sum and generates large employment within an SEZ. For this purpose, an investment threshold of USD 1 billion with the employment of 20,000 may be considered.

Preferential market access

The scope of the Preferential Market Access Policy which allows preference in government procurement should be expanded to include other areas such as defence.

SKP Insights

- In recent times, there have been multiple developments which suggest that it could be an opportune time to invest in the Indian electronics manufacturing sector:
 - The central government and state governments are actively engaged in improving ecosystems and becoming more investor-friendly;
 - With greenfield EMCs coming up, state governments are providing special benefits to anchor units;
 - The Indian market is still underpenetrated with substantial potential;
 - Some of the infrastructural deficiencies like power deficit and road quality have seen considerable improvements over the past few years; and
 - With rising labor costs in China and India's proximity to African and European markets, companies could gain substantial cost advantages by exporting from India.
- It is of utmost importance for companies looking to invest in the electronics industry to have a good understanding of the on-ground situations of greenfield EMCs as various notified EMCs are still under development and lack various facilities in their current state.
- As different states have come up with their own policies and incentives, it is important for a player to understand and decide on the location after comparing its needs and the respective state incentives.
- As the government has received many investment proposals for incentives under M-SIPS already and considering the time taken to receive approval, it is essential to move forward quickly with an investment plan and submit proposals for government approval.
- Considering the growth of e-commerce, it is essential for a product manufacturer to design its supply chain considering both e-commerce and traditional retail sales channels.

Key Industry Associations

DeITY	The Department of Electronics and Information Technology (DeITY) is a division of the Indian Ministry of Communications and Information Technology. DeITY's objective is promoting e-Governance for empowering citizens, promoting the inclusive and sustainable growth of the electronics, IT and ITeS industries, enhancing India's role in internet governance, adopting a multipronged approach that includes the development of human resources, promoting R&D and innovation, enhancing efficiency through digital services and ensuring a secure cyber space.	http://www.meity.gov.in/
ELCINA	The Electronic Industries Association of India (ELCINA) was established in 1967 as the first industry association supporting electronics hardware. ELCINA actively interacts with the government and advises them on issues regarding policy and business environment. It networks with technical institutions and business support organizations in India and abroad to enable business expansion and information dissemination on technical developments.	http://www.elcina.com/
CEAMA	The Consumer Electronics and Appliances Manufacturers Association is an all-India organization in the consumer electronics and durables sector which has existed for over 35 years. CEAMA facilitates industry growth by serving as an interface with the government for meaningful interaction and dialog and interacts with the government in formulating policies for the development of the sector.	http://www.ceama.in/
IEEMA	The Indian Electrical & Electronics Manufacturers' Association (IEEMA) is the apex industry association of 800 plus manufacturers of electrical, industrial electronics and allied equipment in India. Founded in 1948, IEEMA has a pan-India presence with its corporate office at Mumbai and regional offices at Kolkata and Bangalore.	http://ieema.org/
LEDMA	The LED Products Manufacturer's Association (LEDMA) aims to promote awareness about solid state LED products and introduce energy efficiency which makes optimum use of the available power resources in India. The association will help regulate the working of the Indian LED industry and ensure quality product delivery, adherence to international standards and ensure its success in the long-run.	http://www.ledma.org/ledma.org/index.html
MAIT	The Manufacturers' Association for Information Technology (MAIT) was set up in 1982 for purposes of scientific, educational and IT industry promotion and has emerged as an effective, influential and dynamic organization. Representing hardware, training, R&D and hardware design and other associated service segments of the Indian IT industry, MAIT's charter is to develop a globally competitive Indian IT industry, promote the usage of IT in India, strengthen the role of IT in national economic development, etc.	http://www.mait.com/

Acronyms

ABS: Anti-skid Braking System

AIMED: Association of Indian Manufacturers of Medical Devices

ATMP: Automated Training Management Program

BCD: Basic Customs Duty

BDL: Bharat Dynamics Ltd

BEL: Bharat Electronics Limited

BIS: Bureau of Indian Standards

BST: Base Stations

CAGR: Compound Annual Growth Rate

CAPEX: Capital Expenditures

CD: Compact Disk

CEAMA: Consumer Electronics and Appliances Manufacturers Association

CENVAT: Central Value Added Tax

CFL: Compact Fluorescent Lamp

CKD: Completely-Knocked-Down

CPE: Customer Premises Equipment

CPU: Central Processing Unit

CVD: Countervailing Duty

DCS: Distributed Control System

DeitY: Department of Electronics and Information Technology

DPSU: Defence Public Sector Undertakings

DTA: Domestic Tariff Area

DTH: Direct To Home

DVD: Digital Versatile Disc

DWDM: Dense Wavelength Division Multiplexing

EBIDTA: Earnings before Interest, Taxes, Depreciation and Amortization

ECIL: Electronics Corporation of India Limited

EDF: Electronics Development Fund

ELCINA: Electronic Industries Association of India

EMC: Electronic Manufacturing Cluster

EMS: Electronic Manufacturing Services

ESDM: Electronic System Design and Manufacturing

FDI: Foreign Direct Investment

FPD: Flat Panel Display

FTA: Free Trade Agreements

GDP: Gross Domestic Product

GOI: Government of India

GPON: Gigabit Passive Optical Networks

HAL: Hindustan Aeronautics Limited

HDTV: High Definition Television

IC: Integrated Circuits

ICT: Information and Communication Technology

Acronyms

IEEMA: Indian Electrical & Electronics Manufacturers' Association

IESA: India Electronics and Semiconductor Association

INR: Indian Rupee

IT: Information Technology

ITA: Information Technology Agreement

LCD: Liquid Crystal Display

LEDMA: LED Products Manufacturer's Association

LTE: Long-Term Evolution

MAIT: Manufactures' Association for Information Technology

MEIS: Merchandise Exports from India Scheme

MFD: Multi Function Device

MIMO: Multiple Input/Multiple Output

MoU: Memorandum of Understanding

MPLS-TP: Multiprotocol Label Switching-Transport Profile

M-SIPS: Modified Special Incentive Package Scheme

MSME: Micro Small and Medium Enterprises

NIC: Network Interface Controller

NIMZ: National Investment Manufacturing Zone

NKN: National Knowledge Network

NPE: National Policy on Electronics

OEM: Original Equipment Manufacturer

OLT: Optical Line Terminal

ONT: Optical Network Terminal

OTN: Optical Transport Network

PAT: Profit After Tax

PCB: Printed Circuit Boards

PMA: Preferential Market Access

PON: Passive Optical Networks

POTP: Packet Optical Transport Product

POTS: Packet Optical Transport Switch

PTA: Preferential Trade Agreements

PTN: Packet Transport Node

RF: Radio Frequency

SAD: Special Additional Duty

SE: South East

SEZ: Special Economic Zone

SKD: Semi-Knocked-Down

SME: Small Medium Enterprises

UPS: Uninterruptible Power Supply

USB: Universal Serial Bus

VAT: Value Added Tax

VoIP: Voice over Internet Protocol

VR: Virtual Reality

About SKP

SKP is a global professional services group with its principal areas of operations in business advisory, end-to-end finance and accounting solutions including attest function and taxation, business process management, and IT risk advisory. SKP's focus is to provide solutions which result in tangible business benefits and performance improvements.

Our multi-disciplinary teams serve clients from various geographies and industries ensuring global standards. With over 80% of our client-base being international, we truly understand the needs of global companies and their expectations and our customized global solutions are designed to factor in local nuances. Our commitment is rooted in a passion for solutions, empowering our people and clients to achieve more.

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