



## ELECTRONIC SYSTEMS

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### SUMMARY

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The Electronics System Design & Manufacturing (ESDM) industry includes electronic hardware products and components relating to information technology (IT), office automation, telecom, consumer electronics, aviation, aerospace, defence, solar photovoltaic, nano electronics and medical electronics. The industry also includes design-related activities such as product designing, chip designing, Very Large-Scale Integration (VLSI), board designing and embedded systems.

India's digital base is the second largest in the world and is growing at the second-fastest rate among the 17 leading economies.<sup>1</sup>

The Digital India Program has been transforming the Country into a digitally empowered society and knowledge economy since its launch in July 2015.<sup>2</sup>

India is the third biggest start-up hub in the world.<sup>3</sup> In 2019 alone, 1300 new tech start-ups were added.<sup>4</sup>

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### REASONS TO INVEST

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India is home to considerable talent for electronic chip design and embedded software.

Electronic Manufacturing Services (EMS) industry is expected to be a significant contributor to the entire industry's development.

India has strong design and R&D capabilities in auto electronics and industrial electronics.

The Government is promoting the development of Electronics Manufacturing Clusters (EMCs) throughout the Country to provide world-class infrastructure and facilities.

Major Government initiatives such as 'Digital India', 'Make in India' and supportive policies including favourable FDI Policy for electronics manufacturing have simplified the process of setting up manufacturing units in India.

India is the second fastest digitizing economy amongst the 17 leading economies of the world.<sup>5</sup>

There is a huge demand for electronic goods in the Middle-Eastern countries and in emerging markets such as North Africa and Latin America. This provides an export market for 'Made in India' electronic goods.

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[Explore more about infrastructure availability in Electronic Systems sector >](#)

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### RECENT ANNOUNCEMENTS

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**3rd November 2020:** MyGov in collaboration with UN Women, launched the COVID-19 Shri Shakti Challenge in April 2020. With an objective to encourage and involve women led startups to come up with innovative solutions that can help in the fight against COVID19 or solve problems that impact a large number of women.

[Read More](#)

**19th October 2020:** The top three Apple Inc's i.e. Foxconn, Wistron and Pegatron are planning to invest \$900 mn in India in the coming five years. India's new production-linked incentive (PLI) scheme offers \$6.65 bn for increase in sales of locally-made smartphones. The scheme aims to help transform India into an export manufacturing hub.

[Read More](#)

**14th October 2020:** National Informatics Centre (NIC), IEEE Computer Society and Oracle to organise Gov Tech- Thon 2020 from 30 Oct 2020 to 1 Nov 2020. The virtual hackathon aims to incubate new ideas, boost innovation and use technology in agriculture and allied sectors

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**13th October 2020:** Minister of State for Electronics and Information Technology believed that the MoU signing with the premier institutes will help in 'Aatmanirbhar Bharat'. They also expressed their satisfaction over the progress made in the National Supercomputing Mission.

[Read More](#)

**12th October 2020:** Memorandum of Understanding (MoUs) was signed for establishing \*in India\* Supercomputing Infrastructure with Assembly and Manufacturing \*of\* Critical Components. India set to achieve Self Reliance in Supercomputing with Manufacturing Critical Components in India.

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### STATISTICS

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India currently has 687.63 mn internet subscribers and 354 mn smartphone devices (February 2019). Smart users are expected to rise by 84% and reach 859 mn by 2022.<sup>7</sup>

The Consumer Electronics and Appliances Industry in India is expected to become the fifth-largest in the world by 2025.<sup>8</sup>

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### FDI POLICY

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100% Foreign Direct Investment (FDI) is allowed under the Automatic Route in the ESDM industry.<sup>9</sup>

For defence electronics, up to 100% FDI is allowed, subject to industrial license. Under the Automatic Route, up to 49% FDI is allowed. Above 49% is allowed under the Government Route on a case to case basis, wherever it is expected to result in access to modern and 'state-of-the-art' technology in the country.<sup>10</sup>

The Government allows 100% FDI in the medical devices via the Automatic Route. Investors are no longer required to take the Foreign Investment Promotion Board's permission to acquire an existing company or set up a new manufacturing unit in the medical devices sector. The investor, however, will need to comply with the reporting requirements of the Reserve Bank of India (RBI) and comply with all other relevant Central and State laws and regulations.<sup>11</sup>

The cumulative FDI equity inflow in the Electronics industry is USD 2,941.91 mn during the period April 2000 to September 2020.<sup>6</sup>

[Read more about Foreign Direct Investment Policy in India >](#)

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## **SECTOR POLICY**

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### **NATIONAL POLICY ON ELECTRONICS**<sup>12</sup>

The National Policy on Electronics (NPE) 2019 envisions to position India as a global hub for ESDM by encouraging and driving capabilities in the Country for developing core components, including chipsets and by creating an enabling environment for the industry to compete globally.

The NPE 2019 replaces the NPE 2012, which has successfully built the foundation for a competitive Indian ESDM value chain. The NPE 2019 targets to promote domestic manufacturing and export in the entire value chain of ESDM and achieve a turnover of USD 400 Bn by 2025.

For more details on the NPE 2019, please refer to NPE 2019 .

### **MODIFIED SPECIAL INCENTIVE PACKAGE SCHEME (M-SIPS)**<sup>13</sup>

THE M-SIP Scheme, launched in 2012, provided capital subsidy of 20% to electronic industries in Special Economic Zones (SEZs) and 25% to industries outside SEZs. As of 30<sup>th</sup> November 2019, 407 applications with a total proposed investment of INR 1,09,768 cr are under consideration. Out of these 407 applications:

235 applications with about INR 66,407 cr proposed investment have been approved

31 applications with about INR 13,072 cr proposed investment have been recommended by the Appraisal Committee for approval

141 applications with INR 30,289 crore proposed investment are under appraisal process

### **ELECTRONICS DEVELOPMENT FUND (EDF)**<sup>13</sup>

This Scheme helps promote start-ups and innovation. The EDF is a fund of funds that invests in venture funds, which in turn invest in innovation ventures/ start-ups in electronics, nano-electronics and IT. The EDF will invest about INR 659 cr in 11 Daughter Funds which have a total targeted corpus of INR 5576 cr. As of 30<sup>th</sup> November 2019, INR 117.89 cr has already been invested by EDF in 7 Daughter Funds, which have made a total investment of INR 560.98 cr in 75 Ventures/Startups.

### **ELECTRONICS MANUFACTURING CLUSTERS (EMC)**<sup>13</sup>

The Scheme, launched in 2012, encourages entities including State Governments to provide good quality infrastructure within a cluster. Under the Scheme, up to 50% of the project cost for greenfield EMC and 75% for brownfield EMC is given as a grant. As of 31<sup>st</sup> December 2019, 20 EMCs have been provided grant-in-aid of INR 520.88 cr by MeitY.

### **ELECTRONICS MANUFACTURING SCHEMES 2020**<sup>14</sup>

To further strengthen the ESDM ecosystem with a complete value chain and position India as the global hub for ESDM, the following schemes have been notified by the Ministry of Electronics and Information Technology (MeitY):

**Production Linked Incentive Scheme (PLI):** PLI scheme has been notified for Large Scale Electronics Manufacturing in India and aims to attract large investments in the mobile phone manufacturing and specified electronic components, including Assembly, Testing, Marking and Packaging (ATMP) units. Under the scheme, 4% to 6% incentive will be provided on incremental sales of goods manufactured in India. These incentives will be offered for a period of 5 years subsequent to the base year (FY 2019-20). The applicant companies will be required to meet minimum thresholds of investment and production and meet the eligibility criteria to receive incentives under the scheme which has an outlay of about USD 5.5 Bn.

**Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS):** SPECS has been notified to strengthen the value chain for electronics manufacturing in India with the target segment comprising of downstream value chain products such as electronic components, semiconductor/ display fabrication units, ATMP units, specialized sub-assemblies and capital goods for manufacture of aforesaid goods. Under the scheme, 25% incentives will be provided on capital expenditure (on a reimbursement basis) in new units and expansion/ modernization/ diversification of existing units. The scheme will be open for applications for a period of 3 years from the date of notification. All investments made within 5 years from the date of acknowledgment will be eligible for receiving incentives under SPECS which has an outlay of about USD 440 Mn.

**Modified Electronics Manufacturing Clusters Scheme (EMC 2.0):** The scheme has been notified to support the creation of quality infrastructure with common facilities and amenities, including Ready Built Factory (RBF) sheds/ Plug and Play facilities. Under the scheme, financial assistance of 50% of the project cost will be provided to EMC projects subject to a ceiling of INR 70 Cr for every 100 acres of land while 75% of the project cost will be provided for Common Facility Centres (CFCs) subject to a ceiling of INR 70 Cr. The scheme will be open for applications for a period of 3 years from the date of notification and disbursement of funds to the approved projects will be done in a period of 5 years. EMC 2.0 scheme has an outlay of about USD 500 Mn.

Hon'ble Prime Minister, Shri Narendra Modi has given its approval to introduce the Production-Linked Incentive (PLI) Scheme in Electronics System Sector through Ministry of Electronics and Information Technology of with an financial outlay of INR 5000 cr over a five-year period for Enhancing India's Manufacturing Capabilities Enhancing Exports – Atmanirbhar Bharat.

[Explore Government policies/schemes in Electronic Systems sector >](#)

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## **FINANCIAL SUPPORT**

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### **KEY POINTS IN UNION BUDGET 2020-21**

Ministry of Electronics and Information Technology has been allocated USD 919.87 Mn.<sup>19</sup>

Out of the USD 919.87 Mn budget allocation, the revenue expenditure allocation is USD 869.87 Mn and capital expenditure allocation is USD 50 Mn.<sup>20</sup>

The total budget allocation towards the Digital India Program is USD 527.73 Mn.<sup>17</sup>

### **EXPORT INCENTIVES**

Export incentives of 2-3% are available under the Merchandise Export from India Scheme (MEIS). Products such as air conditioning parts and compressors, refrigerating equipment compressors, fully automatic washing machines, colour televisions, and set top boxes for accessing files are included in the list of products that get export incentives.

### **SUPPORT FOR INTERNATIONAL PATENT PROTECTION IN E&IT** <sup>18</sup>

To encourage filing of international patents, a scheme to Support International Patent Protection in Electronics & IT (SIP-EIT) has been commissioned. The Scheme provides financial support to Small and Medium Enterprises (SMEs) and tech start-ups by supporting international patent protection in electronics and IT.

Reimbursement is limited to a total of around USD 21,650 per invention or 50% of the total expenses incurred in filing and processing of patent application up to Grant, whichever is lesser.

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### **INVESTMENT OPPORTUNITIES**

Mobile phone manufacturing <sup>16</sup>

Semi-conductor wafer fabrication manufacturing <sup>16</sup>

Light Emitting Diode (LED) manufacturing <sup>16</sup>

Wearable devices manufacturing <sup>16</sup>

Solar cells and modules manufacturing <sup>16</sup>

LED and Liquid Crystal Display (LCD) manufacturing <sup>15</sup>

Research, innovation and skill development support in emerging technology areas such as Augmented Reality (AR), Virtual Reality (VR), drones, robotics, additive manufacturing, etc <sup>15</sup>

Medical electronic devices manufacturing <sup>15</sup>

Research and development of automotive electronics and power electronics for mobility <sup>15</sup>

Explore projects to invest in Electronic Systems sector >

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### **FOREIGN INVESTORS**

Qualcomm (US)

Samsung (South Korea)

LG (South Korea)

GE (USA)

Bosch (Germany)

Amphenol (US)

Motherson Sumi system (Japan)

Nidec (Japan)

Magneti Marelli (Italy)

Continental (Germany)

Delphi (USA)

Mando Hella (South Korea)

Mitsubishi (Japan)

Harman (USA)

Perto (Brazil)

Giesecke and Deverient (Germany)

Haier (China)

Philips (Netherlands)

Panasonic (Japan)

Huawei (China)

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### **AGENCIES**

1. Ministry of Electronics and Information Technology
2. Electronic Industries Association of India
3. NASSCOM
4. Consumer Electronics and Appliances Manufacturers Association

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