ELECTRONICS SYSTEM DESIGN & MANUFACTURING
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Executive summary

- India has witnessed a substantial spike in the demand of electronic products in the last few years; this is mainly attributed to India’s position as the second-largest mobile phone manufacturer globally and surge in the internet penetration rate.

- The Electronics System Design & Manufacturing (ESDM) market in India is anticipated to increase at a CAGR of 16.1% between 2019 and 2025, owing to strong demand, supportive government policies and increased digitalisation.

- The ESDM sector plays a key role in the government’s goal of generating US$ 1 trillion of economic value from the digital economy by 2025.

- The Government of India attributes high priority to electronics hardware manufacturing as it is an important pillar of Make in India, Digital India and Start-up India programmes.

- With various government initiatives aiming to boost domestic manufacturing, India has already started to witness initial growth with increased production and assembly activities across products such as mobile phones and other consumer electronics.

- Factors such as expanding end-user base, promising start-up ecosystem, strong policy support and rising FDI inflows are driving the ESDM sector.

- Between April 2020 and December 2020, exports of electronic goods stood at US$ 8.77 billion.

Source: Sutherland Research, India Electronics & Semiconductor Association (IESA)
2. ATTRACTIVE OPPORTUNITIES

- One of the top three global economies in terms of number of digital consumers.
- Addressable market for domestic OEMs is projected to be >Rs. 10 lakh crore (US$ USD 131.99 billion) by 2025.
- The government intends to incentivise and attract investments to set up semiconductor FABs (fabrication plants) in India.

1. ROBUST DEMAND

- Large consumer base.
- Second-largest manufacturer of mobile phones in the world.
- One of the largest consumers of electronic products in Asia-Pacific.
- Third-largest start-up hub, coupled with strong research & development (R&D) ecosystem.

3. POLICY SUPPORT

- The production-linked incentive (PLI) schemes will provide companies opportunities to establish manufacturing plants in India.
- 100% FDI is allowed under the automatic route. In case of electronics items for defence, FDI up to 49% is allowed under automatic route and beyond 49%, government approval is required.
- Incentive rates for electronic products export under proposed Remission of Duties or Taxes on Export Products (RoDTEP) scheme.

4. INVESTMENTS

- Large investments for the betterment of infrastructure; National Infrastructure Pipeline (NIP) is a major step in that direction, with investments >US$ 1,364 billion to be made by the government to build world-class infrastructural facilities.
- New schemes, as a part of the National Policy on Electronics (NPE) 2019, outlay to spend ~US$ 6.7 billion in form of incentives.

Source: Sutherland Research, Ministry of Electronics and Information Technology (MeitY)
Market Overview
Major product segments

*The Electronics Market includes (Total Domestic Consumption + Exports) + Electronics Design Market + Electronics Manufacturing Services Market + Electronics Component Market

**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

Note: The top eight product segments by value have been considered for the purpose of market sizing
With over 2x growth, electronics market demand has increased from US$ 145 billion in FY16 to US$ 215 billion in FY19. The market has grown at a CAGR of 14% from 2016-19 and is expected to accelerate at a CAGR of 16.6% in 2020-25, with the total demand likely to account for US$ 540 in FY25.

India witnessed a definite surge in consumption of electronics devices owing to increasing middle-class population, rising disposable income and declining electronics prices.

In FY19, imports accounted for US$ 75 billion, which was 35% of the electronics market demand; is expected to decrease to 12.6% (US$ 68 billion) of the total electronics market by FY25.

Source: India Electronics & Semiconductor Association (IESA)
As per the Union Budget 2020-21, Ministry of Electronics and Information Technology (MeitY) has been allocated ~US$ 920 million. In the allocated budget, revenue expenditure allocation is ~US$ 870 million and capital expenditure allocation is US$ 50 million.

Key government initiatives such as 'Make in India' and 'Digital India' improved the country’s EoDB. In 2020-21, the total budget allocation towards the Digital India programme is ~US$ 530 million.

India has been one of the largest consumers of electronic products specifically in Asia-Pacific due to factors such as rising per capita disposable incomes and consumption in the past decade.

Note: EoDB - Ease of Doing Business
Source: News Article
The Electronics System Design & Manufacturing (ESDM) is broadly segregated into—Electronics System and Electronics Design.

With a spike in demand for electronic products, the ESDM sector in India is predicted to reach US$ 220 billion by 2025, rising at a 16.1% CAGR between 2019 and 2025.

To support the ESDM sector and its growth trajectory, the Government of India (GoI) made electronics production an important pillar of key initiatives such as Make in India, Digital India and Start-up India.

The ESDM sector plays a vital role in the government’s goal of generating US$ 1 trillion of economic value from digital economy by 2025.

Source: India Electronics & Semiconductor Association (IESA)
Electronics system market is expected to witness 2.3x demand of its current size (FY19) to reach US$ 160 billion by FY25.

Electronics design segment, growing at 20.1%, accounted for 22% of ESDM market size in FY19; it is anticipated to be 27% of the ESDM market size in FY25.

At present, most demand for semiconductors is being met through imports from countries such as the US, Japan and Taiwan. To reduce this dependency on imports, the government is boosting electronics manufacturing clusters (EMCs) throughout the country to provide world-class infrastructure and facilities.

Owing to the ongoing pandemic, digital transformation is taking place at an accelerated rate and is laying the foundation for a digitally-enabled India post COVID-19.

Source: India Electronics & Semiconductor Association (IESA)
ESDM landscape in India - key players & clusters

Source: Invest India

Key Players:
- Panasonic
- Midea
- Delta
- TDK
- LG
- Oppo
- Samsung
- Vivo
- Nvidia
- Jabil
- Intel
- Huawei
- Broadcom
- Acer
- Lenovo
- Foxconn
- Flex
- Celkon
- Lava
- TCL
- Google
- Microsoft
- Amazon
- Qualcomm

Clusters:
- NCR | Gurugram
- Maharashtra | Pune
- Karnataka | Bengaluru, Mysuru
- Tamil Nadu | Sriperumbudur
- NCR | Noida, Greater Noida
- Telangana | Hyderabad
- Andhra Pradesh | SriCity, Tirupati
- Tamil Nadu | Chennai
Growth Drivers
Growth drivers

1. POLICIES
   - Policy support to promote electronics manufacturing
   - Initiatives such as ‘Make in India’ and ‘Digital India’
   - Skill development initiatives

2. DEMAND-SIDE DRIVERS
   - Large consumer base
   - Rollout of 5G, and industrial use of Internet of Things (IoT) technology

3. INVESTMENT
   - Increasing FDI inflows
   - Third-largest start-up ecosystem
   - Robust research & development (R&D) ecosystem
The Indian start-up ecosystem is growing steadily, as the total number of start-ups reached 8,900-9,300 in 2019 with 1,300+ added in the same year.

According to Hurun Global Unicorn List 2019, with 21 unicorns, India emerged as the third-largest ecosystem for start-ups; following China and the US and leading over the UK and Israel.

To further boost this ecosystem, IESA has set an ambitious target (in 2018/19) of incubating 100 start-ups, creating 1,000 IPRs, generating business worth US$ 0.14 billion (Rs. 1,000 crore) and creating 1 million jobs over next five years.

Notes: IPR - Intellectual Property Rights  
Source: Sutherland Research, NASSCOM
Bangalore, Delhi-NCR and Mumbai are home to 55-58% start-ups

Source: NASSCOM
Large consumer base

- India emerged as the second-largest manufacturer of mobile phones in the world, with production value of mobile devices reaching US$ 30 billion in 2019-20 from US$ 3 billion in 2014-15.

- In addition, the consumer electronics and appliances industry in India is expected to become the fifth-largest in the world by 2025; this is noticeable for LCD/LED TVs, which witnessed more than 2x growth (by volume) in the past five years.

- Factors such as high internet penetration rate (over 718 million users) and second-largest global smartphone manufacturer boosted penetration of electronic products to the large potential consumer base, which in turn is driving ESDM market.

- Smartphone shipments in India increased by ~8% y-o-y to reach 50.0 million units in the first-quarter of 2020, driven by positive shipments of all smartphone vendors in the market. Samsung led the Indian smartphone market with 24% shipping share, followed by Xiaomi at 23%.

- In 2021, India's smartphone market is expected to rebound to 12-21%, after two years of muted sales.

- In October 2020, LG Electronics India sold over 1.75 lakh units of its G8X ThinQ mobile handset in just 12 hours at Flipkart Big Billion Days Sale and recorded Rs. 350 crore (US$ 47.51 million) revenue against sales.

Note: LCD - Liquid Crystal Display; LED - Light-emitting Diode
Source: Reserve Bank of India (RBI), Ministry of Electronics and Information Technology (MeitY), News Article
Increasing FDI inflows

- The ESDM sector provides lucrative opportunities for investors. From April 2000 to September 2020, Foreign Direct Investment (FDI) equity inflows stood at US$ 2,941.91 million.

- The government allows 100% FDI in the ESDM sector through an automatic route to attract investments from OEMs and IDMs.

The following is a list of areas of interest for investments in ESDM:

1. Mobile phone manufacturing
2. Semiconductor wafer fabrication
3. Light Emitting Diode (LED) and Liquid Crystal Display (LCD)
4. Wearable devices
5. Solar cells and modules
6. Research, innovation and skill development in emerging areas such as Augmented Reality (AR), Virtual Reality (VR), drones, robotics and additive manufacturing
7. Medical electronic devices manufacturing
8. R&D in automotive electronics and power electronics for mobility

Notes: OEM - Original Equipment Manufacturer, IDM - Integrated Device Manufacturers, * - From April 2000 To September 2020
Source: Make in India
Key investors in electronics sector

- In November 2020, Omega Seiki Mobility Pvt Ltd. announced a partnership with Transport Air-Conditioning and Refrigeration (TRANS ACNR) to manufacture refrigerated containerised electric vehicles with lithium-ion batteries.
- In October 2020, Tata Group announced plans to invest Rs. 5,000 crore (US$ 673.20 million) to set up an Apple phone component plant in Hosur, Tamil Nadu.
- In October 2020, Sahasra Electronics announced plans to invest Rs. 350 crore (US$ 47.13 million) over the next four years to assemble mobile phone memory chipsets, laptop hard drives and motherboards in India with two new manufacturing facilities in Rajasthan and UP.

Source: Sutherland Research, News Article
Government initiatives and policy support

New schemes to promote electronics manufacturing

- In April 2020, the Indian government approved three key schemes in order to position India as a global hub for Electronics System Design and Manufacturing (ESDM). This move is anticipated to attract minimum investments worth US$ 6 billion into the country. The initiative includes Production Linked Incentive Scheme (PLI), Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) and Modified Electronics Manufacturing Clusters Scheme (EMC 2.0).
- Of these, Production Linked Incentive Scheme (PLI), one of the biggest incentive, is aimed at boosting domestic manufacturing of mobile phones and their components, including Assembly, Testing, Marking and Packaging (ATMP) units.
- PLI package of ~ US$ 5.7 billion (Rs. 420 billion) will be extended as an incentive of 4-6% on incremental sales (of locally manufactured goods) for a period of five years.
- This is in line with transforming India into a manufacturing hub of electronics and components, at par with established and more diversified countries such as China and Vietnam.
- In October 2020, the government approved applications of 16 electronics companies including 10 mobile phone manufacturers for reward under the product-linked incentive scheme for a total disbursement of Rs. 40,000 crore (US$ 5.44 billion). The international mobile phone manufacturing companies approved to avail incentives for manufacturing mobile phones with invoice value Rs. 15,000 (US$ 204.35) and above are Samsung, Foxconn Hon Hai, Rising Star, Wistron and Pegatron.
- In December 2020, the Government of India issued expression of interest (EoI) to set up or expand the existing semiconductor wafer/ device fabrication (FAB) facilities in the country or acquire semiconductor FABs overseas.

Remission of duties or taxes on export products (RoDTEP) scheme.

- In January 2021, the India Cellular and Electronics Association (ICEA) proposed a RoDTEP rate of 2% on smartphones, 2.4% on featurephones, 2% on tablets/laptops, 3.4% on battery chargers and 1.48% on battery packs.

Source: Sutherland Research, Ministry of Electronics and Information Technology (MeitY), News Article
1. Centre of excellence (CoE) in Noida (Gautam Buddha Nagar)

- In December 2020, to establish the required ecosystem at Noida, the Indian Cellular and Electronics Association (ICEA) proposed the establishment of a centre of excellence in Noida for product-based Li-ion cells (post-cell). This has been approved and groundwork will begin as soon as the Government of India receives sanctions. In partnership with the Ministry of Electronics & Information Technology and industrial associations, the government will create three centres of excellence.

2. Electronic system incubation centre

- On December 02, 2020, ‘Hubli ESDM Exchange’ (HEX), an incubation centre for the development of electronic device design (ESDM), backed and funded by the state government's Karnataka Innovation & Technology Services (KITS) and managed by the India Electronics & Semiconductor Association (IESA), was launched at the KLE Tech Park of the KLE Technical University (KLETU) in Hubballi.

- A fund of Rs. 3.2 crore (US$ 433.46 thousand) for three years has been approved by the Department of Electronics, IT, BT, Science & Technology.

3. Centre for Invention, Innovation, Incubation and Training (CIIIT)

- In December 2020, to strengthen industry–academia partnership and bring qualitative improvements in technical education, Mr. Manoj Sinha, the Lieutenant Governor of Jammu and Kashmir, inaugurated the Centre for Invention, Innovation, Incubation and Training (CIIIT), which was established at a cost of Rs. 181.57 crore (US$ 24.88 million), at the Government Polytechnic College, Baramulla.

Notes: ESSCI - Electronics Sector Skills Council of India; NSDC - National Skill Development Corporation; IESA - India Electronics and Semiconductor Association
Source: Sutherland Research, Ministry of Electronics and Information Technology (MeitY)
Trends and opportunities

1. LOCAL MANUFACTURING OF LAPTOPS, TABLETS
   - According to ICRA, India has the potential to become a significant part of the global supply chain in electronics and become a hub for laptops and tablets by capturing 18% of the global exports.
   - By 2025, these initiatives would have a potential production value of US$ 100 billion and will also generate 5 lakh additional job opportunities.

2. GROWING DOMESTIC HANDSET MANUFACTURING MARKET
   - The increasing domestic demand for handset manufacturing and government support policies have led India to build on its smartphone manufacturing capabilities. By 2025, it is estimated that the addressable market for OEMs (original equipment manufacturers) would reach ~Rs. 10–11 lakh crore (US$ 140–150 billion).

3. ESTABLISHING QUANTUM COMPUTING APPLICATIONS LAB
   - To accelerate quantum computing-led research & development and enable new scientific discoveries, the Ministry of Electronics and Information Technology (MeitY), in collaboration with Amazon Web Services (AWS), will establish a quantum computing applications lab in the country.
   - The MeitY quantum computing applications lab will provide quantum computing as a service to government ministries and departments, researchers, scientists, academia and developers, to enable advances in areas such as manufacturing, healthcare, agriculture and aerospace engineering.

Source: Sutherland Research, News Article
Major recent developments…

1. **August 2020**
   - Samsung Electronics Co. and Apple Inc.’s assembly partners pledged investments worth Rs. 110 billion (US$ 1.5 billion) to establish mobile phone manufacturing units in India.

2. **September 2020**
   - Larsen & Toubro announced closure of its deal to sell its electrical and automation business to Schneider Electric. The companies announced this deal in May 2018; for US$ 1.9 billion (Rs. 14,000 crore).
   - Tamil Nadu unveiled the Electronics and Hardware Manufacturing Policy, which targets US$ 100 billion output by 2025, with a goal to contribute 25% to India’s total electronic exports by 2025.

3. **October 2020**
   - Abaj Group, in partnership with QThree Ventures, will set up ABAJ-QThree Techpark—a manufacturing facility for LED televisions and air-conditioners in Gujarat.
   - Aequs to invest Rs. 3,500 crore (US$ 476.27 million) to set up a consumer electronics cluster in Karnataka.

*Source: Sutherland Research, News Article*
November 2020
- On November 7, 2020, a delegation of representatives of seven Taiwanese firms under Taipei Economic and Cultural Centre (TECC) agreed to invest in YSR Electronics Manufacturing Cluster in Andhra Pradesh.
- HPL Electric & Power established a new R&D centre for smart metres in Gurugram, Haryana.

December 2020
- Lenovo announced its plan to start manufacturing tablets in India and expand its laptop manufacturing by 10x. The company is also expecting to grow by 25-30% in the current fiscal year, due to increase in demand from the education segment and large enterprises.

January 2021
- boAt, a earphones and smart wearable manufacturer, received an investment of US$ 100 million from Warburg Pincus, a key private equity firm.
- India Cellular & Electronics Association announced its plan to create a smartphone design, R&D and application ecosystem in India.
Sector policies

National Policy on Electronics (NPE), 2019

- The National Policy on Electronics (NPE) 2019 aims to position India as a global hub for ESDM by encouraging manufacturing capabilities in the country to develop core components, including chipsets, and creating an environment for the industry to compete on an international platform.

- 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 US$ 400 billion by 2025.

Production-Linked Incentive (PLI) Scheme

On November 11, 2020, Union Cabinet approved the production-linked incentive (PLI) scheme in 10 key sectors (including electronics and white goods) to boost India’s manufacturing capabilities, exports and promote the ‘Atmanirbhar Bharat’ initiative.

For growth industries, such as consumer electronics, electric vehicles and renewable energy, ACC battery production represents one of the biggest economic opportunities. PLI scheme for the ACC battery would allow key domestic and international players to set up a competitive ACC battery plants in the region.

<table>
<thead>
<tr>
<th>Phased Manufacturing Programme (PMP)</th>
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| The phased manufacturing programme is essentially a roadmap for tariff rationalisation wherein duty differentials are created to incentivise domestic manufacturing.

| To promote depth in manufacturing, the roadmap was prepared keeping in view the state of the design/manufacturing ecosystem in India to substantially increase value addition. |

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Ministry/Department</th>
<th>Approved financial outlay over a five-year period</th>
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<tr>
<td>Electronic/Technology Products</td>
<td>Ministry of Electronics and Information Technology</td>
<td>Rs. 5,000 crore (US$ 674.92 million)</td>
</tr>
</tbody>
</table>

Source: Ministry of Electronics and Information Technology (MeitY)
To position India as a global hub for ESDM sector and further the vision of the National Policy on Electronics (NPE) 2019, three new schemes were announced by the Indian government on April 1, 2020, as follows:

1. **Production Linked Incentive Scheme (PLI)**
2. **Scheme for Promotion of Manufacturing of Components and Semiconductors (SPECS)**
3. **Electronics Manufacturing Cluster Scheme (EMC 2.0)**

**Expected Five Year Outcomes**

<table>
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<tr>
<th>Outcome</th>
<th>Target</th>
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<tr>
<td>Production</td>
<td>US$ 106 billion</td>
</tr>
<tr>
<td>Exports</td>
<td>US$ 77 billion</td>
</tr>
<tr>
<td>Employment</td>
<td>1 million</td>
</tr>
</tbody>
</table>

**Total incentives of up to Rs. 500 billion (~ US$ 6.7 billion)**

*Source: Sutherland Research, Ministry of Electronics and Information Technology (MeitY)
New schemes for electronics manufacturing…(2/3)

### Production Linked Incentive Scheme (PLI)
- PLI offers a production linked incentive to boost domestic manufacturing and attract large investments in mobile phone manufacturing and specified electronic components, including Assembly, Testing, Marking and Packaging (ATMP) of units.
- Incentive: 4-6% on incremental sales (over base year) of goods manufactured in India; incentives up to US$ 5 billion will be awarded over a period of five years
- Eligibility: Subject to thresholds of incremental investments and incremental sales of manufactured goods

### Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)
- Aims to offset disabilities in domestic manufacturing of electronic components and semiconductors in order to strengthen the electronics manufacturing ecosystem in the country
- Incentive: 25% on capital expenditure pertaining to plant, machinery, equipment, associated utilities and technology, including R&D on reimbursement basis; up to US$ 500 million over a period of eight years
- Target Segments: Electronic components, semiconductors, specialised subassemblies and capital goods for these items
- Eligibility: Applicable to investments in new units and expansion of the existing units.

### Modified Electronics Manufacturing Clusters scheme (EMC 2.0)
- EMC 2.0 has been introduced with the objective to address the disabilities, by providing support to create world-class infrastructure, along with common facilities and amenities, including RBF sheds/Plug and Play facilities to attract key global electronics manufacturers and their supply chain to establish units in India.
- Incentive: 50% of project costs, subject to a ceiling of ~ US$ 10 million for every 100 acres of land.
- Anchor Units: Electronics manufacturing companies with a commitment to purchase/lease a minimum of 20% of the land area and invest a minimum of ~US$ 40 million.

**Notes:** RBF - Ready Built Factory  
**Source:** Sutherland Research, Ministry of Electronics and Information Technology (MeitY)
New schemes for electronics manufacturing…(3/3)

Electronics Development Fund (EDF)
- To promote start-ups and innovation, a scheme called Electronics Development Fund (EDF) was launched.
- The EDF is a fund of funds that invest in venture funds, which in turn invest in innovation ventures/start-ups in electronics, nano-electronics and IT. At least 50% of the corpus has to be invested in ventures working in the ESDM sector.
- CANBANK Venture Capital Funds Ltd. (CVCFL), a subsidiary of Canara Bank, is the fund manager for EDF.

Export Incentives
- Export incentives of 2-3% are available under the Merchandise Export from India Scheme (MEIS).
- The list of products that get export incentives include air conditioning parts and compressors, refrigerating equipment compressors, fully automatic washing machines, televisions and others.

Modified Special Incentive Package Scheme (M-SIPS)
- To promote large scale manufacturing in the country, M-SIPS was announced by the government in 2012. This scheme provides capital subsidy of 25% for the electronics industry outside the special economic zones (SEZs). Electronics industries located inside SEZs are provided 20% subsidy. The scheme provides:
  1. Capital Subsidy—20% for investments in special economic zones (SEZs) and 25% in non-SEZs.
  2. Incentives for both new units and expansion units.
  3. Incentives for a period of five years from the date of approval of application.
  4. Incentives for 44 categories/verticals across the value chain (raw materials including assembly, testing, packaging and accessories, chips, components).
  5. Minimum investment threshold for each product category/vertical (from ~ US$ 140,000 for manufacturing of accessories to ~ US$ 680 million for memory semiconductor wafer fabrication unit).
  6. Establishments to be in industrial area notified by central/state govt.

Source: Make in India, Ministry of Electronics and Information Technology (MeitY)
Key Industry Contacts
## Key Industry Contacts

<table>
<thead>
<tr>
<th>Agency</th>
<th>Contact Information</th>
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<tbody>
<tr>
<td><strong>India Electronics &amp; Semiconductor Association</strong>&lt;br&gt;Unit G-02, Ground Floor, Prestige Terminus-II, 901 Civil Aviation Road, Konena Agrahara, Bengaluru - 560 017&lt;br&gt;Phone: +91 80 4540 6100&lt;br&gt;Fax: +91 80 80 2522 0048&lt;br&gt;Website: <a href="https://iesaonline.org/">https://iesaonline.org/</a></td>
<td></td>
</tr>
<tr>
<td><strong>Consumer Electronics and Appliances Manufacturers Association</strong>&lt;br&gt;F-4/ 23, 4th Floor, Wave 1st Silver Tower&lt;br&gt;Sector - 18 Noida - 201 301 (UP)&lt;br&gt;Phone: +91-120-4265697&lt;br&gt;e-mail: <a href="mailto:info@ceama.in">info@ceama.in</a>&lt;br&gt;Website: <a href="https://ceama.in/">https://ceama.in/</a></td>
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<tr>
<td><strong>Electronic Industries Association of India</strong>&lt;br&gt;ELCINA House, 422 Okhla Industrial Estate, Phase III.&lt;br&gt;New Delhi, INDIA-110020&lt;br&gt;Tel: +91-11-26924597, 26928053, 41615985&lt;br&gt;Fax: +91-11-26923440&lt;br&gt;e-mail: <a href="mailto:info@elcina.com">info@elcina.com</a>&lt;br&gt;Website: <a href="http://www.elcina.com/">http://www.elcina.com/</a></td>
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<td><strong>NASSCOM</strong>&lt;br&gt;Plot 7 to 10, Sector 126, Noida - 201303&lt;br&gt;Phone: +91-120-4990111&lt;br&gt;Fax: +91-120-4990119&lt;br&gt;e-mail: <a href="mailto:north@nasscom.in">north@nasscom.in</a>&lt;br&gt;Website: <a href="https://nasscom.in/">https://nasscom.in/</a></td>
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Glossary

- ESDM: Electronics System Design and Manufacturing
- MeitY: Ministry of Electronics and Information Technology
- IESA: India Electronics and Semiconductor Association
- PLI: Production Linked Incentive Scheme
- SPECS: Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors
- EMC 2.0: Modified Electronics Manufacturing Clusters Scheme
- ESSCI: Electronics Sector Skills Council of India
- NSDC: National Skill Development Corporation
- ICT: Information and Communications Technology
- ITU: International Telecommunication Union
- NPE: National Policy on Electronics
- NDCP: National Digital Communications Policy
- PMP: Phased Manufacturing Programme
- MEIS: Merchandise Export from India Scheme
- SEZ: Special Economic Zone
- US$: US Dollar
- FY: Indian Financial Year (April to March)
## Exchange Rates

### Exchange Rates (Fiscal Year)

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<th>Year</th>
<th>Rs. Equivalent of one US$</th>
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### Exchange Rates (Calendar Year)

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**Note:** As of January 2021

**Source:** Reserve Bank of India, Average for the year
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