



Electronics Manufacturing Service in India

India as global manufacturing destination

2018

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\$346 bn

Global EMS sector (2017)

Source: New Venture Research, Reeds Electronics Research, Grand View Research

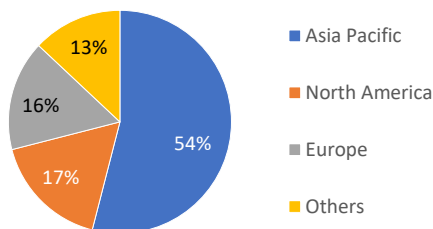
Global Electronics Manufacturing Service

Over the past few years, continued demand for smartphones and electronics has propelled the growth in electronics manufacturing. While most of the Original Equipment Manufacturers (OEM) manufacture their own products, contract manufacturing services in Electronics manufacturing services (EMS) has been growing as business model.

Today, global EMS market is over \$346bn and growing at CAGR 7.7%.

Global EMS by Region

Asia Pacific is projected to remain the largest & fastest growing regional segment. 54% of EMS market is Asia Pacific. China, SE Asia, Taiwan are some of the popular electronics manufacturing locations.

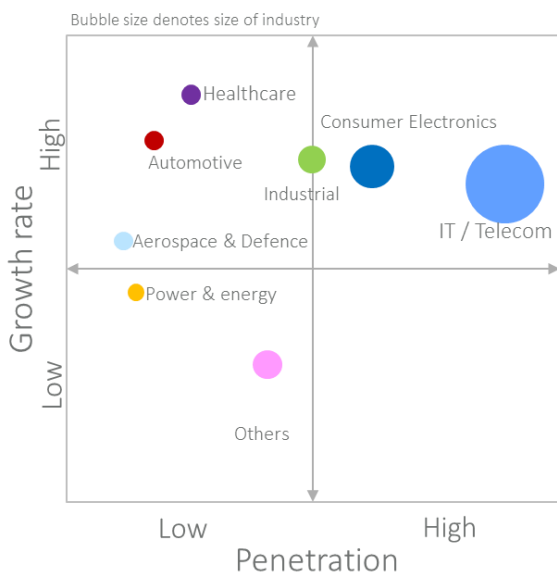


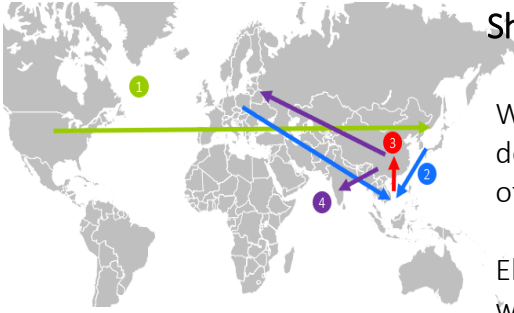
Global EMS by end use industry

Based on end-use industry, the market is segmented into healthcare, industrial, automotive, aerospace & defence, IT & telecom, power & energy, consumer electronics.

The traditional segments operated by largest providers are computer and storage, consumer electronics, communication infrastructure (3C). 3C segments represent approx. 75% share of the total EMS industry.

Healthcare sector is anticipated to emerge as a fastest growing end-use segment. Other high growth segments include Automotive and industrials. Chart shows penetration of various segments and growth rate.





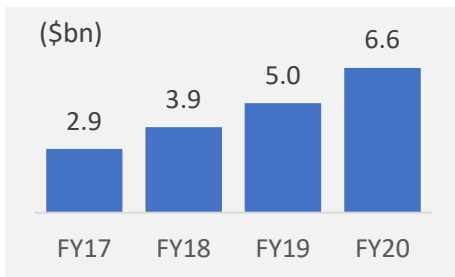
Shift in Manufacturing to India & East Europe

World has seen multiple shifts in preferred electronics manufacturing destinations. This has been driven mainly by domestic demand and cost of manufacturing.

Electronics manufacturing first started in North America. Post-world war, there was shift of manufacturing from US to Japan. In next wave of development, manufacturing facilities shifted from EU and Japan to Taiwan and another SE Asia. Later capacities shifted to China driven by domestic demand and weakening SE Asia. Recently we are seeing trends of Shift to India and East Europe due to rising labour costs in China. However, East Europe and India remain market largely for low to medium volume components.

\$6.6 bn

Indian EMS market by 2020



India EMS market

Last three years saw rapid growth in domestic electronics production. Indian electronics production grew by 45% on CAGR between 2015-17. Growth in domestic electronics production incremental demand is increasingly through domestic production and that sets up a platform for cost effective exports business.

| Amount in \$bn | Production | Exports | Imports | Domestic Demand |
|--------------------------------|-------------|------------|-------------|-----------------|
| Computer Hardware | 1.7 | 0.4 | 7.2 | 8.6 |
| Consumer Electronics | 9.1 | 0.8 | 4.1 | 12.4 |
| Electronic components | 5.1 | 1.9 | 5.4 | 8.6 |
| Electronic instruments | 5.6 | 1.9 | 5.4 | 9.1 |
| Telecom instruments | 11.2 | 1.1 | 14.7 | 24.8 |
| Total (2015) * | 32.7 | 6.0 | 36.9 | 63.6 |
| Total (2017) #estimates | 69.2 | 8.3 | 38.5 | 99.4 |
| <i>CAGR</i> | <i>45%</i> | <i>18%</i> | <i>2%</i> | <i>25%</i> |

Source: * Niti Aayog, #Estimates, ^Frost & Sullivan, MEITY

High growth in domestic demand and production is good platform for growth for Indian EMS industry. Currently Indian EMS industry is close to \$4bn and expected to grow 30+% annually. This is result of favourable government policies, Make-in-India initiative, and rising costs in China, amongst other key growth factors.

Electronics Manufacturing is pillar of Digital India initiative.

Target NET ZERO Imports.

Favourable Policies

The Ministry of Electronics and Information Technology (MeitY), Government of India has initiated the 'Digital India' programme with the vision to transform India into a digitally empowered society and knowledge economy.

- As on Feb 2018, 107 Electronics manufacturing Investment proposals with proposed investments of \$3.3bn under Modified Special Incentive Package Scheme (M-SIPS) has been approved. The scheme mainly provides 20-25% subsidy for investments in capital expenditure for setting up of an electronic manufacturing facility (20% for SEZ Units and 25% for non-SEZ Units).
- 21 Electronics Manufacturing Clusters (18 Greenfield EMCs and 3 Common Facility Centre (CFC) in Brownfield EMC) have been granted final approval and are under implementation.
- An Electronic Development Fund (Fund of Funds) has been launched and 22 daughter funds involving a total targeted corpus of \$1.7 bn have been approved.
- FDI up to 100% under the automatic route is permitted for electronic product manufacturing, including R&D

Favourable policies to promote local manufacturing and exports

| Program/Policies | Impact on Electronics Manufacturing |
|--|--|
| Make in India and Government procurement under Make in India | Investment in downstream segments creating demand Industry |
| Jan Dhan Yojana | Boost to smart cards, ATMs, PoS terminals |
| Swachh Bharat Abhiyan | Automation systems, instrumentation for water and waste management |
| Domestic Efficient Lighting Programme | LED lighting |
| Smart Cities | Automation systems, power management products, automotive and transportation systems |
| Higher Customs Duty on Key Products and Components | Encourage local sourcing and ecosystem development |
| Indigenous components for Renewable Projects | Demand for Photovoltaic system developed in India |

Other Growth Drivers

Growth drivers seen in the Indian markets are on both sides – Demand and Supply. Various factors are seen resulting in growth of domestic electronics demand. These include

- Growing middle class population and rising disposable income coupled with declining electronics prices and adoption of high-end technology devices has led to rapid consumption of electronics.
- Government push for development of capacities in infrastructure, transport, healthcare and energy has resulted demand in non-traditional electronics.
- With labour costs rising in China, Indian electronics exports has gained competitive advantage.

Further, supply side factors shaping Indian EMS sector include

- Fast growing domestic demand for electronics has attracted global OEMs in Indian Market.

- These OEMs and their global suppliers/EMS partners have started evaluating India as manufacturing destination.
- Domestic EMS companies are now increasingly expanding their service portfolios along the value chain transforming into full-service providers adding design, development and assembly capabilities.

However, Indian market still has several challenges. Electronics components ecosystem is still nascent and developing. Scale of Indian players is low and impacts cost structure. Technology disruptions may result in obsolescence of existing manufacturing assets. Competitiveness of Indian players still low to win big accounts. Large global EMS players are already entering Indian markets in big way and would pose serious competition to domestic players.

At IMAP, we believe that there will be an urgent need for players in Indian Electronics Manufacturing Services space to expand capacities to capture not only the domestic market but also cater to the global requirement. With global players planning to set up India shop, there would be significant deal activity on this front in 2018 & 2019.

| Year | Investor | Company | Deal type |
|------|-----------------------------------|--|------------------|
| 2018 | SFO Technologies | ICAM Solution Pvt Ltd | Acquisition |
| 2018 | SFO Technologies | Eastern Engineering Company | Acquisition |
| 2018 | Rakon | Centum Electronics | Sold stake in JV |
| 2018 | Amber Ent. | Ever Electronics | Acquisition |
| 2018 | Danlaw Technologies India | Titan Timeproducts Ltd | Acquisition |
| 2018 | Kimball Electronics, Inc | GES Holdings, Inc (including India business) | Acquisition |
| 2018 | Asian Industry Co | FIEM Industries | JV |
| 2017 | Amber Ent. | IL JIN Electronics | Acquisition |
| 2017 | Cyient | AnSem N.V. | Acquisition |
| 2017 | Motherson Sumi | PKC, Finland | Acquisition |
| 2017 | Thales, France | Reliance Defence | JV |
| 2017 | Minda Industries | Tung Thih Electronic Co Ltd, Taiwan | JV |
| 2016 | Centum Electronics | Adetel, France | Acquisition |
| 2015 | Cyient | Rangsons | Acquisition |
| 2012 | Reliance Equity | Amber Enterprises India | PE |
| 2011 | IIML, Franklin Templeton PE, AMCG | SFO Technologies | PE |
| 2011 | IFCI Ventures | Amber Enterprises India | PE |
| 2011 | Canbank Ventures | Vinyas Innovative Technologies | PE |
| 2010 | Subhkam Ventures | Nicheken Technologies | PE |

Source: Multiple Industry News

191

Deals closed in 2017

\$12+ bn

Transaction value of deals closed in 2017

36%

Cross border transactions share in 2017

About IMAP

IMAP is a global network of investment banking firms with presence in 35 countries. IMAP closed over 2100 transactions valued at \$90+bn in last 10 years. IMAP is ranked 7th in the world in the mid-market segment by Thomson Reuters and has executed 191 transactions worth US\$12 billion in 2017. IMAP has 48 offices in more than 35 countries, > 400 M&A professionals. IMAP India is exclusive India partner of IMAP.

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