



Electronic Manufacturing Services

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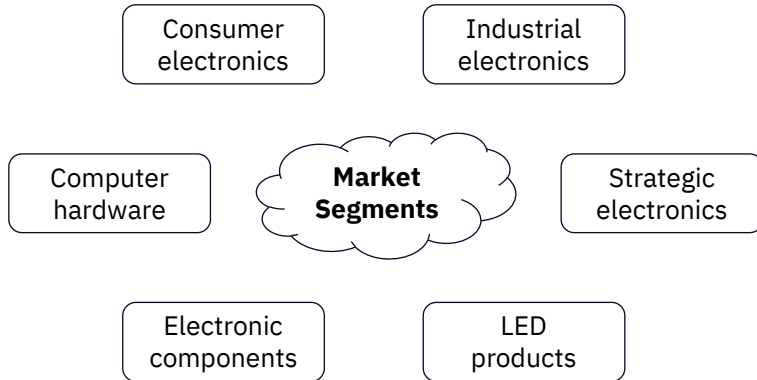


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Introduction

Electronics manufacturing services (EMS) include design, manufacturing, testing, distribution and return/repair services for electronic components and assemblies carried out for original equipment manufacturers (OEMs).



Operating model

EMS companies operate under two broad models:

1. High Volume, Low Mix (HVLM)
2. High Mix, Low Volume (HMLV)

Mix refers generally to the complexity or different models of the Printed Circuit Board (PCB) assembly. Volume refers to the number of units built, with products like consumer electronics on the high end and prototype, medical electronics or machinery on the low end.

Global Tier-1 EMS players are increasing their focus towards HMLV electronics manufacturing as the demand is growing and it also helps mitigate client concentration risk which is generally seen in the HVLM space

Larger EMS players have a global presence with a wide product portfolio and end-to-end solution. Their centralized procurement helps them to procure in bulk and thus pass on the benefits to the buyers giving these Tier-1 players a competitive advantage. The global presence of tier 1 EMS players makes it viable to manufacture HMLV products in the regions having high labor rates as the HMLV manufacturing is labor intensive.



Industry Outlook

Global outlook

The global EMS industry has grown rapidly over the last 15-20 years as it has expanded the scope of its activities for the Electronic Systems Design & Manufacturing (ESDM) sector. From a small share of 10-15% in the ESDM industry, EMS now straddles more than 40-45% by value.

Demand for consumer electronic products is on the rise, driven by innovation, price deflation and growing household incomes, particularly in the emerging countries in Asia.

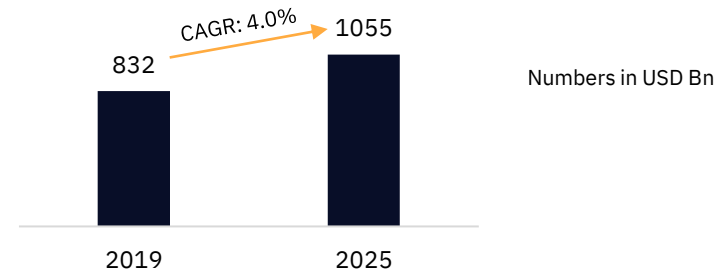
Surging demand for application of artificial intelligence and proliferating sales of consumer electronics are the major factors driving the industry growth. Further, rising adoption of electric vehicles worldwide is adding considerable momentum to the industry expansion.

Among the service in the EMS market (design & engineering, manufacturing, assembly and others), the high demand of design and engineering services will drive growth in the EMS industry.

With the advent of miniaturization and adoption of emerging technologies in the Industrial Internet of Things (IIoT) and enhanced communication posed by 5G, the electronic component design and

assembly has been revolutionized. For instance, the communication base stations for 5G developed a superior antenna technology, such as MIMO, leading to a rise in the number and performance of radiating elements. The medical industry is anticipated to witness a significant growth owing to increasing demand for medical devices.

The global EMS market was valued at USD **832 Bn** in 2019 and is expected to grow at a CAGR of 4.0% by 2025, reaching **USD 1,055 Bn**. China exported USD 685 Bn of electronics to the world during 2019-20. India expects to serve 25% of the global mobile market which is estimated to be valued at USD 415 Bn in 2025.



Source: Mordor Intelligence, ELCINA, Global market insights, Beroe, Grand view research



Industry Outlook

India outlook

Electronic imports, at USD 46.7 billion in FY21 and accounting for **11.8% of India's total imports**, is the 2nd biggest import category, next only to crude petroleum oil. As per the EMS Taskforce Report by ELCINA (Jan 2021):

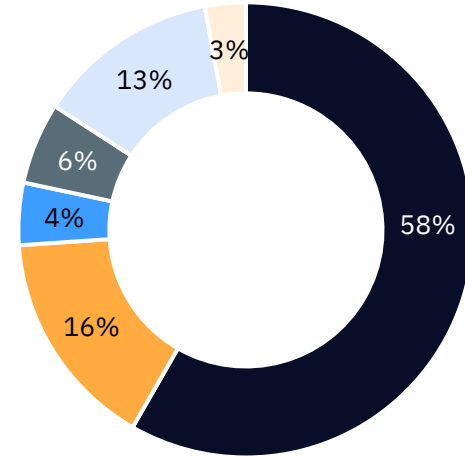
- Indian EMS industry is facing an opportunity loss of USD 32.5 bn comprising USD 15.5 bn of PCBA / sub-assembly imports for electronics goods manufactured in India and USD 17 bn of EMS in imported electronics goods of USD 53.5 bn; and
- Indian EMS industry to increase from USD 23.5 Bn (FY20) to USD 152 Bn (FY25), meeting 75% of EMS requirement of USD 203 bn

Consumer electronics make up **58% of the total electronics production in FY 21.**

Government of India has set a target of **USD 100 Bn exports of mobiles** alone **by 2025**. This is driven by the PLI Scheme and targets about 25% of the global mobile market valued at USD 415 Bn.

The government has also introduced various policies and incentive schemes such as National Policy on Electronics, Phased Manufacturing Programme (PMP), PLI Scheme, Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) and Modified Electronics Manufacturing Clusters scheme (EMC 2.0), etc.

Shares in total production of electronic goods (FY 2021)



- Consumer Electronics
- Industrial Electronics
- Computer Hardware
- Strategic Electronics
- Electronic Components
- LED Products

Source: Mordor Intelligence, NEC-ASSOCHAM report, ELCINA, 2021 annual report of MeitY, IBEF, Department of Commerce

Thank You

For detailed presentation and discussions, please reach out to us @



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