

Electronic Contract Manufacturing and Design Services Market Assessment, By Service Type [Electronic Design & Engineering, Electronics Assembly, Electronic Manufacturing, Others], By Enduser [Healthcare, Automotive, Aerospace & Defense, Industrial, IT & Telecommunication, Others], By Region, Opportunities and Forecast, 2016-2030F

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Abstracts

Global electronic contract manufacturing and design services market has experienced significant growth in recent years and is expected to maintain a strong pace of expansion in the coming years. With projected revenue of approximately USD 501.34 billion in 2022, the market is forecasted to reach a value of USD 1090.4 billion by 2030, displaying a robust CAGR of 10.2% from 2023 to 2030.

Cost savings, access to specialized expertise, faster time-to-market, scalability, less risk, and higher product quality are all advantages of electronic contract manufacturing and design services. Companies may focus on their core skills while outsourcing the manufacture and design of electronic components and devices, resulting in greater efficiency and competitiveness.

The electronic contract manufacturing and design services market is experiencing growth due to increased outsourcing patterns, rising consumer electronics demand, and the fast evolution of technology. Companies are looking for cost-effective solutions, specialized expertise, and flexibility, which is driving market expansion. These factors propel the industry's growth and innovation.

Consumer electronics demand is a major growth driver in the electronic contract



manufacturing and design services market. Consumer electronics continue to play a critical part in this rise, with worldwide semiconductor sales reaching an all-time high of USD 574 billion in 2022, regardless of market downturns. Complex electrical components and design services are required for these items, which include smartphones, tablets, and wearables. Consistent innovation in the consumer electronics sector and ever-shortening product lifecycles drive the demand for manufacturing and design services, driving this market. As a result, to address this need, electronic contract manufacturers are increasingly collaborating with consumer electronics companies.

For instance, in March 2022, Benchmark Electronics increased its optical integration, photonics packaging, and photonics test capabilities at its RF and Photonics Center of Innovation in Phoenix to enable cutting-edge applications.

Global Supply Chain Optimization to Fuel the Electronic Contract Manufacturing and Design Services Market

Global supply chain optimization is a critical driver of the electronic contract manufacturing and design services market. Companies desire efficient and global production and distribution networks to simplify their operations and decrease expenses. Electronic Contract Manufacturing (ECM) service providers supply the expertise and infrastructure required to build these networks, allowing businesses to access a global pool of resources, skilled labor, and cost-effective manufacturing facilities. Globalization improves supply chain agility, shortens lead times, and improves inventory management. As a result, ECM services have become vital in assisting organizations to respond to changing market needs and maintain a competitive advantage.

For example, in May 2023, Hon Hai and YAGEO's joint ventured, under which XSemi, transferred its IC and SiC product lines to Hon Hai's IC design subsidiary. The shareholding structure of XSemi was adjusted.

Demand For Customization Fuels Market Growth

The rising need for customization across various sectors propels the electronic contract manufacturing & design services market forward. Businesses attempt to differentiate themselves in today's competitive market by delivering distinctive, specialized technological products. ECM service providers specialize in developing customized solutions by combining engineering skills and flexible production capabilities. This



development has prompted collaboration between ECM businesses and industries seeking tailored electronics, ranging from medical gadgets to aeronautical components. As the need for customized goods grows, ECM services play an increasingly important role in addressing these needs, making them critical contributors to industry development and innovation.

For example, in August 2022, Celestica Inc. unveiled the Athena G2 NVMe storage array, Nebula G2 all-flash storage expansion, and Titan G2 dense storage array at the Flash Memory Summit, all of which provide versatile alternatives for data center solutions.

Dominance of Electronic Design and Engineering in the Market

Electronic design and engineering dominate the electronic contract manufacturing and design services market by offering crucial knowledge in technological development and innovation. This market is at the forefront of developing cutting-edge electrical solutions, guaranteeing that goods are not only functional but also cost-effective and high performing. Their involvement in developing unique solutions adapted to customers' demands and shifting technological trends positions them as industry leaders in producing high-quality, market-ready goods, ultimately driving the sector's success and development.

For instance, in January 2023, FIT Hon Teng Limited acquired PRETTL SWH group, expanding its capabilities in EV components. PRETTL SWH specializes in automotive sensor harnesses and connectivity solutions, aligning with FIT's EV strategy.

Asia-Pacific Dominates the Market

Asia-Pacific has emerged as a market leader in electronic contract manufacturing and design services due to a large pool of highly skilled labor at a competitive cost, making it an appealing destination for electronics manufacturing. In addition, Asia-Pacific countries, especially China, have made significant investments in infrastructure and technology, creating an environment favorable to innovation and growth. Furthermore, the region benefits from its closeness to the world's main consumer electronics markets, allowing for effective supply chain management. The combination of forces has propelled Asia-Pacific to the leading edge of the electronic contract manufacturing and design services market, propelling both output and innovation.

For instance, in August 2022, Plexus Corp. built a new USD 60 million advanced



manufacturing facility in Bangkok, Thailand, to serve complex product design and manufacture in APAC.

Government Initiatives are Acting as a Catalyst

Governments worldwide are beginning to recognize the importance of electronic contract manufacturing and design services in their industrial landscapes. They are putting policies and efforts in place to boost the electronic contract manufacturing and design services market. For example, India's National Policy on Electronics 2019 (NPE 2019) aspires to make India a worldwide ESDM powerhouse. It promotes native capabilities in key components such as chipsets and develops an atmosphere conducive to global competitiveness. Similarly, China, the United States, and Taiwan aggressively invest in their ECMDS industries. These activities help to increase the worldwide ECMDS market by promoting economic progress, technological innovation, and security.

For instance, in July 2022, The Indian government's measures have increased electronics output from INR 2.43 trillion in 2015-16 to INR 5.54 trillion in 2020-21. The emphasis is on semiconductor development and self-sufficiency.

Impact of COVID-19

The COVID-19 pandemic caused substantial changes in the electronic contract manufacturing and design services market. Before the pandemic, the sector flourished, driven by high demand for electronics. However, the sector suffered losses as the virus impacted global supply chains, manufacturing, and logistics due to lockdowns. With the recovery from the pandemic, there was a rise in demand for medical gadgets, remote work technologies, and 5G infrastructure, resulting in a new growth trajectory. In addition, the sector has reacted by emphasizing resilience, agility, and digitization to prevent future disruptions, making it more resilient and adaptive in the face of unanticipated obstacles.

Impact of Russia-Ukraine War

The Russia-Ukraine war influenced the worldwide electronic contract manufacturing and design services business. Ukraine's role as a key source of critical raw materials such as semiconductor-grade neon gas and manufacturing chemicals such as palladium and hexafluoro butadiene has been jeopardized, raising fears about global supply chain disruption. Rising palladium and nickel prices, as well as the possibility of Russia



restricting vital supply exports, offer substantial hurdles. Smaller chipmakers could witness production disruptions, while larger ones, such as Intel and TSMC, are seeking other supplies. In the coming years, the circumstance may result in more expensive technological items and pricing searches for microelectronic buyers as well.

Key Players Landscape and Outlook

The electronic contract manufacturing and design services market is characterized by high activity and fierce competition, with major players such as Hon Hai Precision Industry Co., Ltd., FLEX LTD., Benchmark Electronics, Inc., Jabil Inc., and Venture Corporation leading the way. These major stakeholders are responsible for driving innovation, providing full manufacturing and design solutions, and maintaining worldwide supply chain networks. However, the market forecast is positive, owing to rising demand for electrical components, IoT devices, and consumer electronics. Furthermore, the market is likely to profit from the integration of sophisticated technologies including 5G, AI, and IoT, while experiencing obstacles such as supply chain disruptions, geopolitical issues, and changing consumer preferences.

In September 2023, Blue Solutions, a solid-state battery manufacturer, collaborated with Foxconn and SolidEdge Solution to create solid-state batteries for electric two-wheelers, with an initial concentration on the Indonesian market but potentially expanding into other electric vehicles.

In June 2023, Benchmark Electronics marked the grand reopening of its Almelo, Netherlands facility. It has undergone significant expansion and upgrades to cater to industries like aerospace, defense, industrial, medical, and semiconductor capital equipment.



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